FOSS

BactoScan™ 5

The approved rapid method for determination of total bacteria in raw milk

ANALYTICS BEYOND MEASURE

Based on Individual Bacteria Count (IBC), BactoScan™ 5 gives an accurate determination of the hygienic quality of raw milk with a testing capacity of up to 200 samples per hour. Built on the legacy of previous generations, BactoScan 5 offers safe and efficient analysis, making it easier than ever to ensure food safety and fair milk payment.

Improve operational efficency
Reduce preparation and handling time. Benefit from the same leading accuracy with fewer operator steps and automatic enzyme dosing. Keep control of your instrument through web based digital services offered by FOSS IQX.

Operate responsibly
Reduce handling and use of reagents, minimize waste and avoid use of hazardous chemicals, thanks to a simplified reagent concept that helps you meet your sustainability goals while improving operator safety.

Lower your cost of ownership
Reduced use of reagents leads to lower cost of ownership, while improved hardware reduces service and maintenance expenses. High uptime is ensured at a low cost thanks to more durable parts that are easier and less costly to maintain with a FOSS service agreement.

Sample type
Raw milk from cow, goat, sheep and buffalo.

Parameters
Individual Bacteria Count (IBC/ml).

Technology
Flow cytometry* technology that enables precise and instant milk bacteria analysis.

Approvals
BactoScan™ technology complies with ISO/IDF guidelines and FDA/NCIMS and MicroVal standards.

**BactoScan™ flow cytometry is an approved rapid electronic counting method.*

Specifications

Performance
Measuring range*: 1,000 - 150,000,000 IBC/ml
Performance range: 10,000 - 20,000,000 IBC/ml

Repeatability			**Reproducibility (between BactoScan 5 instruments):**		
Range (IBC x 1000/ml)	s_r log_{10} units	Typical s_r log_{10} units	Range (IBC x 1000/ml)	s_r log_{10} units	Typical s_r log_{10} units
10 - 50	0.07	0.06	10 - 50	0.11	0.08
51 - 200	0.05	0.04	51 - 200	0.07	0.06
>200	0.04	0.02	>200	0.06	0.04
Entire range	0.05				

Carry-over effect	< 0.5 % (uncompensated)
Sample type	Raw milk from cow, sheep, goat, buffalo
Analysis capacity	65, 100, 130, 150, 200 samples/hour
Working factor	Standard 300, (optional: 95, 600 and 1200)
Accuracy	Typical Sy,x<0.25 log_{10} units in the entire measuring range
Reference or anchor method:	Standard Plate Count (SPC) CFU/ml**. ISO 21187 | IDF 196: 2021; ISO 4833-1:2013 and ISO 16297 I IDF 161: 2020

Application data

Analysis time	9 minutes (to the first analysis result)
Sample intake	approx. 4.5 ml
Sample temperature during analysis	2-4 °C - non preserved raw milk samples 2-42 °C - Azidiol preserved raw milk samples
Sample quality	Raw milk of normal composition and good quality. Unpreserved or preserved with azidiol
Instrument management	
Networking software	IQX™

**Defined by limit of detection.*

***IBC can be used as an alternative method to the IDF 100B: 1991 and AOAC 986.33 reference methods for the rapid and accurate determination of the hygienic quality of cow, sheep, goat and buffalo raw milk for payment purposes.*

Standards and Approvals

BactoScan™ technology complies with:

- ISO/IDF standards and AOAC
- MicroVal approved and FDA/NCIMS (approval pending)
- A number of national approvals

Standard equipment

Basic instrument incl. system table, pipette, PC, PC SW and PC table, monitor arm, alarm lamp, reagent containers and trolley for containers.

Optional equipment

Extra reagent containers, ID bar code laser scanner, 2D reader, sample bottle rotation, Conveyor 5000 basic, Conveyor 7, Conveyor extensions, Output buffer, Sample racks.

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