

MilkoScan™ FT2



MilkoScan™ FT2 for advanced compositional analysis of milk and dairy products

Features and benefits

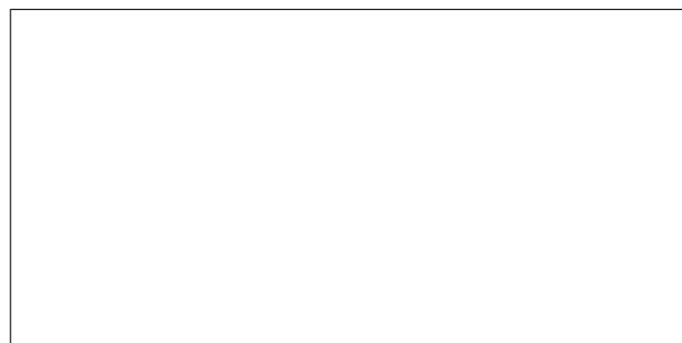
- A robust FTIR solution for liquid dairy product analysis
 - use it in the lab or in the production environment
- Flow system designed for pumping viscous samples undiluted
 - save operator time, ensure fast and accurate results
- Built-in conductivity sensor gives high performance FPD analysis
 - avoid poor quality milk due to added water
- Low reagent cost and easy sample preparation
 - save time and money
- Improved optics with better accuracy and repeatability
 - standardise closer to limits for better production economy
- Software traceability tools
 - **document validity of results**
- Prediction performance and outlier detection
 - **improve quality assurance**
- Optional WinISI™ III software package
 - **simplify development of customised calibrations or new parameters**
- Transfer your existing MilkoScan™ FT120 calibrations
 - avoid extra re-calibration costs

FOSS

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Dedicated Analytical Solutions

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Description

The MilkoScan™ FT2 is the ideal solution for dairies requiring reliable, fast, accurate analysis with minimum sample handling. And now you can move analysis from the laboratory out into the production environment where the results are needed.

Sample preparation is easy, as many viscous samples require no dilution before analysis and cost per sample is low as no expensive reagents are needed. The automatic flow system and zero-setting function ensure reliable and consistent results.

The MilkoScan FT2 analyses the main product components - all at once. Measurement of Freezing Point Depression by conductance is a new feature for dairies that are analysing raw milk.

Ready-made calibrations allow for the simultaneous analysis of major parameters in most raw, intermediate and finished dairy products. These calibrations are transferable from one instrument to another and are based on the extensive FOSS FTIR database built-up over more than 10 years. See application notes for up-to date and detailed information about available calibrations.

Technology

The MilkoScan FT2 has a FTIR (Fourier Transform Infrared Spectroscopy) interferometer that scans the mid-infrared spectrum. Analysing new products and parameters is only a matter of calibration development.

System description

The MilkoScan FT2 consists of the analyser and the basic Foss Integrator software package. The PC is not included.

Components measured

These calibration packages are standard:

Milk application: Fat, Protein, Lactose, Total Solids, Solids-non-Fat, Freezing Point Depression, Total Acidity, Free Fatty Acids, Density, Urea, Casein.

Cream application: Fat, Protein, Lactose, Total Solids, Solids-non-Fat.

Concentrated milk application: Fat, Total Solids, Solids-non-Fat.

Infant formula: Fat, Total Solids, Solids-non-Fat.

Optional calibration packages covering e.g. whey products, fermented products, desserts and ice cream are available. An unlimited number of components can be analysed simultaneously. Contact your local FOSS representative for details.

Performance data

Calibration range:	Up to 60% Fat in cream, Up to 15% Protein in concentrated milk Up to 25% Sugar in ice cream mix, Up to 50% Total Solids in concentrated milk
Analysis time:	30 seconds
Carry-over:	< 1%
Accuracy:	< 0.8% CV, coefficient of variation (F, P, L, TS, SnF in raw cow's milk)
Repeatability:	< 0.20% CV, coefficient of variation (F, P, L, TS, SnF in raw cow's milk)
Sample temperature:	5 - 55°C
Sample volume:	Programmable 5 - 25 ml, standard volume is 10 ml. (min. 11 ml for FPD)
Optical system:	Hermetically sealed, humidity control.
Cleaning:	Automatic and programmable.
Calibration routines:	Slope/Intercept adjustment.
Options in WinISI™ SW package:	PLS (Partial Least Squares), modified PLS calibrations and PCA (Principal Component Analysis). Flexible selection of spectral intervals.

Standards and approvals

MilkoScan™ FT2 is CE labeled and complies with the following directives:

- EMC Directive 89/336/EC and amendments EN 61000-6-3 and EN 61000-6-2
- Low voltage directive 73/23/EC and amendment EN/IEC 61010-1 version 2
- Classification, packaging and labeling of dangerous preparations directive 99/45/EC and amendments
- Packaging and packaging waste directive 94/62/EC
- Directive on waste electrical and electronic equipment (WEEE)
- Food and Drug Administration (FDA), Title 21, CFR, chapter J

Installation requirements

Power supply:	100-240 ±10% V/AC – 50-60 Hz
Power consumption:	Max. 500 VA during measurement, 150 VA in standby
Ambient temperature:	5 - 40°C
Ambient humidity:	< 80% RH, cyclic up to 93% when going from low to high ambient temperature
Weight:	99 kg
Dimensions (H×W×D):	540×880×473 mm (excl. PC)
Degree of protection:	IP43 IP43 protected PC is optional
Noise level:	< 70 dB
Vibration tolerance:	0.19g (RMS)
Fuse:	T 10.0 A
Installation category:	II
Pollution degree:	2
Altitude:	≤ 2000 m

PC requirements (Minimum)

- 1 GHz CPU speed (minimum)
- 512 MB RAM (Emulator: 256 MB)
- 10 GB free disk space (Emulator: 1GB)
- SVGA at 1024*768, min. 16 bit colours
- Windows® XP (Emulator can run on Windows® 2000)
- Microsoft® Office (optional)
- CD drive
- 2 USB Ports
- Mouse/trackball
- Windows-based printer

