

MilkoScan™ FT1

Milk Standardisation with Targeted Adulteration Module



ANALYTICS BEYOND MEASURE

MilkoScan™ FT1 is dedicated to liquid dairy production. It allows you to control and standardise liquid dairy products while simultaneously screening for abnormalities.

Standardise for profit and consistent quality

Milk standardisation is key as a means to improve economy in dairy production. Beyond the financial gains of standardisation, the improved consistency of end products builds and protects your brand.

Protect against adulteration

Raw milk containing abnormalities remains a challenge in the dairy industry. Abnormalities can be caused by either deliberate or accidental adulteration. With MilkoScan FT1 you can screen incoming raw milk samples to identify a suspect raw milk sample quickly and as a normal part of everyday testing.

FOSS your global partner in profitable dairying

For decades FOSS has helped dairies and milk testing laboratories to keep pace with their analysis demands. Support is provided by certified support engineers stationed close to our customers across the globe.

Sample types

Liquid and semi-solid dairy products such as milk, cream, whey and others

Parameters

Fat, Protein, Lactose, Total Solids, SnF, FPD, Total Acidity, Density, FFA, Citric Acids, Casein, Urea, Sucrose, Glucose, Galactose, True Protein, NPN, pH, Saturated FA, monounsaturated FA, conductivity, NPN-CU, Fructose

Targeted and untargeted adulteration module.

Technology

FTIR technology for milk analysis - used by more than 5000 major dairy users worldwide

Value

Pay the right price

Providing up to 120 reliable measurements per hour, the MilkoScan FT1 helps to ensure that payments to suppliers are neither too high nor too low, but spot on.

Smart Segregation

A quick measurement at intake for mass balance calculation allows effective and reliable results for subsequent standardisation of milk entering production.

Rapid return and low running costs

A wealth of technical features built on the renowned MilkoScan platform ensures smooth operations for a fast return on investment and economic long term use.

Targeted Adulteration Module

Milk has been found to be adulterated for commercial gains. To quickly assess the damage done, it is now mandatory for dairies to check for the adulteration that is present in Milk. With an objective to assist Indian customers screen and identify the adulterants, quickly and accurately, FOSS developed the Targeted Adulteration Module or the TAM.

The Targeted Adulteration Module or the TAM is a pre-calibrated simple tool to screen specific adulteration in Milk. When milk is subjected to Fat, SNF and Milk parameter tests in MilkoScan FT1, the TAM simultaneously screens the milk and identifies the presence of Adulterants.

It takes just 30 seconds to identify the presence of 14 popular adulterants in Milk. This is in addition to the identification of 15 Milk constituents in Milk.

The TAM identifies the presence of following adulterants in Milk, thus helping dairies to manufacture and supply safe and healthy milk and milk products.

Technology

Purpose built FTIR unit for reliable analysis operations

Built on the well proven technology MilkoScan FT1 provides a solid platform for liquid milk analysis. With Fourier transform infrared technology (FTIR), the operator does not have to handle any chemicals. The FTIR interferometer scans the full mid-infrared spectrum which makes it a robust FTIR solution for use in the laboratory. The accuracy and repeatability of results are comparable to the chemical methods (or better), but does not require the long testing time. The performance is in compliance with AOAC (Association of Analytical Chemists) and IDF (International Dairy Federation).

Results are automatically stored on a PC for traceability.

The TAM identifies the presence of following adulterants in Milk, thus helping dairies to manufacture and supply safe and healthy milk and milk products.

Adulterants with Targeted Adulteration Module

1. Ammonium Sulphate
2. Detergents
3. Glucose
4. Maltose
5. Melamine
6. Salt
7. Sodium Carbonate
8. Sodium Citrate
9. Sorbitol
10. Starch
11. Sucrose
12. Urea
13. Vegetable Oils
14. Formaldehyde
15. Maltodextrin
16. Nitrate
17. Sodium Sulphate
18. Fructose
19. Hydrogen Peroxide
20. Added water
21. Cyanuric Acid
22. Hydroxyproline
23. NaOH
24. Galactose

Foss Digital Services

Foss Connect

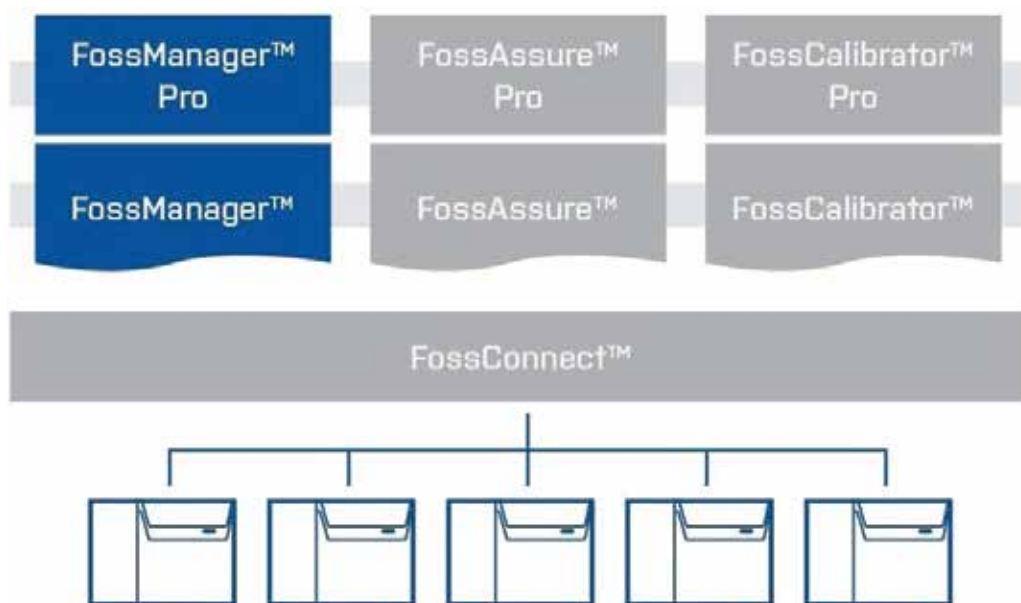
FOSS Digital Services helps you to reduce your production costs and secure the quality of your products regardless of where they are produced. FOSS Digital Services will ensure you have peace of mind knowing that your data is backed-up and protected for whenever you need it.



Foss Manager

Securing your instrument configuration and analytic data

FossManager empowers you to manage your analytical instruments from your PC anytime and anywhere. Configure settings and monitor performance on one or more instruments at a single site or across several locations. Remote instrument management allows you to access your data and back-up settings whenever it suits you and from any location.



Specifications

Feature	Specification
Calibration range	Up to 50% Fat, Up to 7% Protein, Up to 7% Lactose and Up to 55% total solids
Included calibrations <ul style="list-style-type: none"> • Milk • Cream • Whey and permeate • Yoghurt 	Fat, Protein, Lactose, Total Solids, SnF, FPD, Total Acidity, Density, FFA, Citric Acids, Urea, Casein, Glucose, Galactose, Sucrose, True Protein, NPN, pH, Saturated FA, monounsaturated FA, conductivity, NPN-CU, Fructose Fat, Protein, Lactose, Total solids, SnF, FPD Fat, Protein, Lactose, Total Solids, Total Acidity Fat, Protein, Total Solids, SnF
Optional Calibrations Fortified Milk and Whey <ul style="list-style-type: none"> • Concentrated Milk • Concentrated Whey Yoghurt & Fermented <ul style="list-style-type: none"> • Yoghurt/Fermented Products Dessert and ice cream <ul style="list-style-type: none"> • Dessert and Ice Cream 	Requires Application Module Fat, Total Solids, SnF, Protein, Lactose Fat, Total Solids, Lactose, Protein, SnF Fat, Protein, Lactose, Glucose, Sucrose, Total Sugars, Total Solids, SnF, Fructose, Lactic Acid Fat, Protein, Lactose, Glucose, Sucrose, Fructose, Total Sugars, Total Solids, SnF
ASM module (Optional)	Calibration tool and ready to use model for screening for abnormal milk
Targeted models for adulteration	Ammonium Sulphate, Detergents, Glucose, Maltose, Melamine, Salt, Sodium Carbonate, Sodium Citrate, Sorbitol, Starch, Sucrose, Urea, Vegetable Oils, Formaldehyde, Maltodextrin, Nitrate, Sodium Sulphate, Fructose, Hydrogen Peroxide, Added water, Cyanuric Acid, Hydroxyproline, NaOH, Galactose
Accuracy	≤1% CV* on major raw cow milk components (fat, protein, lactose, total solids)
Repeatability	≤0.25% CV* on major raw cow milk components (fat, protein, lactose, total solids)
Analysis time	30 seconds for milk
Sample volume	8 ml.
Sample temperature	5 - 55°C (the sample must be homogeneous)
Cleaning	Automatic and programmable
Purging efficiency	≥ 99%
Calibration routine	Slope / Intercept adjustment
Network connections	LIMS, FossManager™
Optical system	Hermetically sealed, humidity control

*Calibration range can be expanded as per sample provided

Installation requirements

Dimensions (H*W*D):	382 x 850 x 543 mm
Weight:	80 kg
Power Supply:	(115 or 230) ±15% V/AC - 50/60 Hz
Power Consumption:	Max. 600 VA during measurement, 80 VA in standby
Ambient Temperature:	10 - 35°C
Ambient Humidity:	< 80 RH, Cyclic up to 93 RH from low to high, working temperature in 93 RH
Environment:	For best performance place the instrument on a stable surface away from excessive and continuous vibration
Noise Level:	70 dB (measured when the instrument is analysing, at 1.6 m level and 60 sec. equivalent)

Standards and approvals

The MilkoScan™ FT1 is CE labelled and complies with the following directives:

ElectroMagnetic Compatibility (EMC) Directive 2004/108/EC
Low Voltage Directive (LVD) 2006/95/EC
Packaging and packaging waste Directive 94/62/EC
WEEE Directive 2002/96/EC
REACH Directive 1907/2006/EC

The MilkoScan FT1 is in compliance with the AOAC (Association of Analytical Chemists) and IDF (International Dairy Federation).

In the process of continuous improvement, specifications are subject to change without prior notice.

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