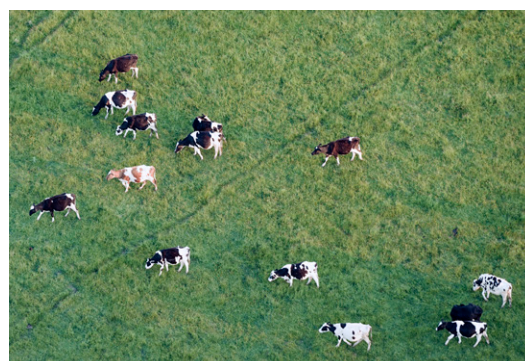# MilkoScan™ 7 RM

High capacity milk-testing for dairy herd improvement and milk payment

The MilkoScan™ 7 RM is a high capacity, fully automatic milk analyser for central milk testing (CMT) payment and dairy herd improvement (DHI) measuring up to 17 parameters in just six seconds.

Advanced testing options with MilkoScan 7 RM
In addition to standard parameters, MilkoScan 7 RM provides advanced screening for ketosis, urea and untargeted raw milk (adulteration) screening. Screening for ketosis as part of routine milk testing allows you to single out suspect samples and thereby get an early indication of the overall ketosis status in dairy herds.

Innovative 7th generation technology
With an improved optics and signal/noise ratio, you can rely on the repeatability of results at 100 to 600 samples per hour. Flow system technology with an optional diamond cuvette backed by a 10 year guarantee, ensures maximum uptime. It is easy to clean and includes a sample conveyor without need for compressed air.

Optimise instrument management with FOSS digital services
Ensure consistent performance of all instruments in your network and avoid downtime by making upgrades and adjustments while instruments continue to run. Protect your database and calibration models with automatic back up of data.

Sample type
Raw cow, sheep, goat and buffalo milk

Parameters
Fat, protein, lactose, solids, urea, freezing point depression, Free Fatty Acids, casein, fatty acids profile, ketosis and others such as pH, H-index and untargeted adulteration screening

Technology
Fourier Transform InfraRed (FTIR).
Can be integrated with the Fossomatic™ 7 or Fossomatic™ 7 DC somatic cell counter to form a CombiFoss™ 7

Approvals
IDF and AOAC compliant

Specifications

Most of the calibrations are using multiple wavelengths selected freely from the entire Mid-IR spectrum in order to optimize robustness and accuracy. Compared to traditional filter calibrations, they are called full spectrum calibrations.

Performance Carry-over for all components <1% relative

Component	Measuring range	Performance range	Repeatability	Accuracy bulk	Accuracy single cow
Fat	0-15%	2-15%	Cv < 0.5%	Cv < 1.0%	Cv < 1.5%
Protein	0-10%	2-10%	Cv < 0.5%	Cv < 0.9%	Cv < 1.5%
Lactose	0-10%	2-10%	Cv < 0.5%	Cv < 0.9%	Cv < 1.5%
Solids	0-20%	2-20%	Cv < 0.5%	Cv < 1.0%	Cv < 1.5%
Urea	10-100mg/dl	10-100mg/dl	Sd < 1.5mg/dl	Sd < 3mg/dl	Sd < 3.5mg/dl
Citric acid	0.1-0.5%	0.1-0.5%	Sd< 0.005%	Sd < 0.01%	Sd < 0.015%
FPD (Screening)	400-600 m°C	450-550 m°C	Sd < 0.5 m°C	Sd < 4 m°C	N/A

Novel parameters	
Fatty acids profile	see the application note no. 64
Ketosis screening (BHB, acetone)	see the application note no. 35
Untargeted screening raw milk (adulteration)	see the application note no. 5375
Application data	
Analysis capacity	100, 200, 300, 400, 500 or 600 samples per hour
Sample intake	5 mL
Required sample temperature	37 - 42°C
Performance Specifications	Full spectrum calibrations

Instrument management	
Networking software	FossManager™

Standards and Approvals

MilkoScan™ 7 RM is CE-labelled and complies with the following directives and regulations:
- EMC (ElectroMagnetic Compatibility) Directive 2014/30/EU
- LVD (Low Voltage) Directive 2014/35/EU
- Machinery Safety Directive 2006/42/EC
- Regulation (EC) 1272/2008 on classification, labelling and packaging of substances and mixture, CLP (EC)
- WEEE Directive 2002/96/EC
- Packaging and packaging waste Directive 94/62/EC
- REACH 1907/2006/EC

The MilkoScan™ 7 RM techniques comply with:
- ISO 9622 / IDF 141:2013
- AOAC official method 972.16

By using wavelengths from the entire Mid-IR spectrum for each component, calibrations are optimised in terms of robustness and/or accuracy (temperature, homogenization and humidity)