

NIRS™ DS3

The dedicated analyser providing full confidence in dairy powder analysis



The NIRS™ DS3 provides NIR analysis of dairy powders with exceptional accuracy and in compliance with IDF 201 guidelines. Designed for use in the laboratory or at the production line, making it ideal for routine production control and monitoring of final product quality.

More yield with reduced energy

Accurate routine analysis helps you to produce closer to targets and avoid rework. For example, getting the moisture concentration just 0.1% closer to target, can save you EUR 50,000 per annum at typical production rates.

Optimise your NIR management with FOSS digital services

Ensure consistent performance of all instruments in your network. Make adjustments on instrument calibration and configuration remotely. Protect your database and calibration models with automatic back up of data. Remote instrument monitoring allows FOSS NIR experts to troubleshoot and diagnose performance issues without interrupting operations.

At-line control makes quality a matter of routine

The NIRS DS3 is easy to use, thereby ensuring low risk of operator error. Just place the sample in the sample cup, push the button and get results in less than a minute.

Sample types

Direct measurements of dairy powders.
Analysis of other solid and semi-solid dairy products such as ice-cream mix.

Parameters

FOSS global calibrations include: Fat, protein, moisture, ash, lactose and acidity.

Technology

NIR monochromator across the full spectral range from 400 to 2500 nm. Measuring mode: Reflectance or transreflectance (for liquids).

Factory standardisation ensures seamless transfer of calibrations.

Specifications

Feature	Specification
Dimensions (w x d x h)	375 x 490 x 300 mm
Weight	27 kg
Degree of protection	IP 65
Measurement mode	Reflectance or transmittance (for liquids)
Wavelength range	400 - 2500 nm
Detector	Silicon (400 - 1100 nm), Lead Sulphide, PbS (1100 - 2500 nm)
Optical bandwidth	8.75 ± 0.10 nm
Data resolution	0.5 nm
Number of data points	4200
Number of subsamples	Default: 7 for small cup; 8 for large cup
Self test	12 minutes (variable)
Analysis time	<1 minute for 32 scans (8 subsamples, 4 scans per subsample)
Network connections	FossManager™

Installation requirements

NIRS™ DS3	
Voltage supply	100-240 V AC*, frequency 50-60 Hz, Class 1, protective earth
Ambient temperature	5 - 40°C
Storage temperature	-20 to 70°C
Ambient humidity	< 93% RH
Mechanical environment	Stationary during use
EMC environment	Laboratory use, industry requirements

*Mains supply voltage fluctuations not exceeding ±10% of the rated voltage.

Optional services

Digital Services	FossAssure™
Care Solutions	FossCare™, SmartCare™