

ProFOSS™ 2 / ProFOSS™ for in line process analysis of fresh cheese / butter / powder



ProFoss™ 2 provides continuous non-destructive analysis, directly in the fresh cheese / butter process line without bypass. A dedicated sample interface feeds data to an analyser housed in a robust cabinet mounted at the relevant location in the production area. Measurements are displayed in the control room and results can be fed into a regulation system for closed - loop automatic control. Precise instrument matching enhances method development, minimises implementation efforts and ensures calibration model transferability between analysers.

Sample

Fresh Cheese

Butter

Parameters

Total solids, Moisture & Fat

Moisture, SNF, Fat & Salt

ProFoss™ provides non destructive analysis of dairy powder directly in the process line without bypass. A dedicated sample interface feeds data to an analyser housed in a robust cabinet mounted at the relevant location in the production area, for example, after the secondary drying stage (i.e. fluid bed) to check final moisture content. Results can be fed into your production/ SCADA system and/or be presented on a screen in the production area for rapid adjustments of your process. Precise instrument matching enhances method development, minimises implementation efforts and ensures calibration model transferability between analysers.

Sample	Parameters
Skim Milk Powder, Whole Milk Powder, Whey Powder, WPC or Caseinate Powder	Moisture, Protein & Fat



ProFoss™ 2 / ProFoss™ - High Resolution NIR technology

ProFoss™ 2 / ProFoss™ is unique in employing a near infrared-based analysis technology known as High Resolution diode array analysis. The High Resolution technology ensures accuracy and reliability with measurements based on a high density of data points.

Accurate and continuous results

Measurement accuracy is in line with traditional laboratory analysis. However, results are presented continuously rather than a few times per day giving the opportunity for immediate adjustments to production. This together with the dedicated dairy powder sample interface ensures you a total solution optimal for your process.

ProFoss™ 2 / ProFoss™ streamlines your manufacturing process with:

- High resolution diode array technology for accurate and continuous analysis
- Built-in instrument standardisation for quick and simple implementation
- Dedicated sample interfaces providing accuracy and rapid implementation
- Instant measurement of complete wavelength range for direct measurement of fast moving samples
- Quantitative and qualitative data for better in-line process control
- Consistent and uninterrupted analytical accuracy with Dual lamp backup technology
- Integrated intelligent FOSS calibration tool, ISical™ enables anyone to develop calibrations.
- Interface for integration to local control systems enables automatic regulation (OPC, 4-20mA, Profibus etc communication).

Robust and low maintenance operation

The ProFoss system keeps on running to ensure high uptime and minimal impact on daily production. Once calibrated, there is no need for constant adjustments caused by drift or other weaknesses. The high stability of the High Resolution technology ensures the same accuracy day in and day out without hidden operational costs.

Intelligent calibration tool - ISical™

Calibration is done either through WinISI™ or by using the intelligent calibration tool, ISical™. ISical requires a minimum of user experience. Each time a reference sample is collected from the process, a button is pressed on the analyzer to synchronize the scan with the collected sample. Reference data is added and a calibration is automatically developed (or an existing calibration expanded with the new data). The ISical tool automatically optimizes the calibration algorithms by selecting the most reliable model for future use.

Powder probe:

In line analysis of fine powder like dairy powders etc. The powder probe interface can easily be installed into a hopper or pipe with free falling product. The probe has no moving parts. The probe is automatically cleaned with compressed air before each analysis.

Materials	: Teflon (PCTFE)
Diameter	: 1"
Length	: 7"
Fiber	: Steel armoured fiber bundle (1, 3, 5 or 10 meters)
Air	: Clean compressed air 43 – 72 PSI
Temperature	: Max 120°C
Installation	: 1" Swagelok crimp fitting
Hygiene	: USDA, Dairy
Cleaning:	: Wash in water, hot or cold depending on product



Lateral transmittance:

In line analysis of slurries and viscous products such as WPC, Cream Cheese, Mozzarella etc. The Lateral transmittance probe does not restrict the flow rate of the product and can easily be installed in the production line using a standard GEA Tuchenhagen flowcell for installation in a pipe or by welding an interface flange into the wall of a tank.



- Materials : Stainless steel
- Lens : Sapphire, 5 mm thick, with food grade EPDM O-ring seal
- Temperature : Max 150°C (302°F)
- Pressure : 10bar, 145 PSI
- Hygiene : USDA, Dairy
- Optical fiber : Steel armoured fiber bundle (1, 3, 5 or 10 meters)
- Pipe flowcells : Fits directly into GEA Tuchenhagen Varinline Access units (DN40 to DN150, 1 ½" to 6" with 68 mm opening or DN 25,1" with 50 mm opening)
- Tank: : Stainless steel welding flange.

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