FOSS

ProFoss™ 2

In-line process analysis in rendering production

ANALYTICS BEYOND MEASURE

ProFoss™ 2 is installed in-line for measuring content of fat, protein and moisture in the production of meal products in the rendering process. The results can be used for real-time monitoring and adjustment of the production and blending process.

Streamline your rendering production with in-line analysis
Get complete control of your rendering production with a continuous flow of real-time results. Optimise your production process and control blending to ensure that your meal products meet specifications.

Increase your profits from day one
Profit opportunities are waiting to be found in your rendering process. For instance, more accurate control of the protein content can increase earnings significantly. At the same time, improved control of moisture can help you optimise yield in your production.

Ensure accurate results with NIR validation
Check your process with a leading NIR solution to ensure optimal performance of your ProFoss 2 calibrations.

Sample types
Feather meal, meat and bone meal, poultry meal, blood meal

Parameters
Fat, moisture, protein

Technology
High resolution NIR technology with a windows reflectance interface connected directly to the process line.

Specifications

Measuring technology: Reflectance	
Analysis frequency	Real time: Average analysis time per result 2 - 3 seconds
Wavelength range	1100 - 1650 nm
Detector	InGaAs Diode Array
Spectral dispersion InGaAs Diode Array detector	1,1 nm/pixel
Process line interface	Sapphire; Diameter 45 mm, thickness 12 mm, with food grade FFPM O-ring seal
Product temperature	Max 150 °C (302 °F)
Product pressure	Production pressure < 21 bar (< 305 PSI). Shock pressure < 50 bar (< 725 PSI)

Technology	**NIR technology**
Software package	ISIscan NOVA™ for instrument control
Wavelength accuracy	< 0.5 nm
Wavelength precision	< 0.02 nm
Wavelength temperature stability	< 0.01 nm/ °C
Spectral noice	< 60 micro AU
Vibrations - require optical fiber fixation	0.4 Grms
Ambient operating temperature	Basic configuration -5 °C - 40 °C (23 °F - 104 °F), Cooling with a compressed air line allows use up to 65 °C (149 °F) ATEX configuration 0 °C - 50 °C (32 °F - 122 °F)
Pressurised air – cooling (Amb. Temp. 45 - 65°C)	Cooling air Flow rate minimum 5 l/min, >99.9 % water free, >99.9 % free of oil and fine particles down to 0.3 µm
Ambient humidity	< 90% RH
Dimensions (W x D x H)	w x h x d = 420 x 420 x 135 mm (16.5 x 16.5 x 5.3 inches) + brackets to hold the unit
Weight	25 kg (20 kg)
Power supply	1 phase, 100-240 VAC (max ±10 % of the rated voltage), max. 40 VA, 50 - 60 Hx
Cabinet / Housing materials	1.5 mm (lid 2.5mm) Stainless Steel EN 1.4301 (SS2333)
Mechanical environment	Process control equipment
Degree of protection	IP 69*
Approvals	ATEX & IECEx certified (dust explosion approved)
Hygiene	3A hygiene certified
Communication	KEPServerEX (Ethernet, Analogue Profibus/Profinet) to PLC/SCADA; FossManager™
Network	High quality, shielded LAN cable; minimum category 5e. RJ 45 (IP 67) LAN connections
Operation	Indoor use or outdoor shielded from rain and direct sunlight

**IP69 is the highest protection for dust entering the unit. IP69 means protected against the effect of high-pressure water and/or steam cleaning high temperature.*

FOSS
Tel.: +45 7010 3370
info@foss.dk · www.fossanalytics.com
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