



NEAR-IR FOURIER ANALYZER



InfraLUM® FT-12



METHOD

Near-IR Fourier spectroscopy.

PRINCIPLE OF OPERATION

Is based on analysis of the composition and properties of a sample using its near-IR Fourier transmission spectrum

FEATURES AND BENEFITS

- Simultaneous fast non-destructive determination of multiple parameters of interest
- FT spectroscopy provides highest accuracy of analysis
- Most of the samples are analyzed without grinding
- Turnkey application calibration models are provided
- No reagents and consumables are needed, no sample preparation
- Easy-to-operate



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APPLICATION EXAMPLES

Qualitative analysis	
	Authentication (quality assurance of source materials and products)
	Identification (attributing a sample to a certain known type)
Quantitative analysis	
Wheat grains	Gluten, moisture, protein, ash, glassiness, starch
Wheat flour	Gluten, moisture, protein, ash, whiteness
Barley	Protein, moisture, starch, fiber
Rye grains	Protein, moisture, starch
Rye flour	Moisture, ash, protein
Corn	Protein, oil, moisture, sugar, starch
Soya beans and flour	Protein, oil, moisture, fiber
Dry milk	Protein, fat, moisture
Raw milk	Protein, fat, dry matter, lactose
Curds, yoghurts	Protein, fat, acidity, moisture, sugar
Cheese	Fat, moisture
Mixed fodder	Raw protein, moisture, raw fat, raw ash, fiber
Oil-bearing plants	Oil content, moisture, fat, protein
Fish flour	Protein, moisture, fat, raw ash, phosphorus content
Hay, haylage	Protein, moisture, fiber, fat
Oats	Protein, moisture, fiber
Yeast	Raw protein, Barnstein's protein, moisture, raw ash
Minced meat	Protein, moisture, fat
Mineral fertilizers	Phosphorus oxide, nitrogen, moisture
Cellulose	Hardness, whiteness, moisture

EQUIPMENT AND OPTIONS

- InfraLUM[®] FT-12 NIR Fourier-transform analyzer with SpectraLUM/Pro[®] software package
- Set of measuring cells and calibration databases (in accordance with a list of parameters of interest)

SPECIFICATIONS

Spectral range	13200 – 8700 cm ⁻¹ (760 – 1150 nm)
Resolution	8, 16, 32 cm ⁻¹
Typical spectrum measuring time	1.5 min
Cell	from 1.5 to 27 mm
Power requirements	110 / 220 Vac, 60/50 Hz
Power consumption	110 W
Size	520x450x370 mm
Weight	32 kg



WARRANTY

All LUMEX equipment is covered by a 12-month warranty.

SERVICES

Calibration models can be adapted to the Customer set of samples or new calibration models can be developed upon Customer request. Installation and commissioning of LUMEX instruments are provided by our engineer. On-site training for personnel in basic operation procedures using the Customer samples may be provided. Free replacement of parts under warranty and repair of the instruments are provided within the warranty period.

The information and specifications in this publication are subject to change without notice.

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