FAT

Protein

Dry Matter

LUMiFlector

designed by *Colani*

Product parameter determination & monitoring

Lab version with MRS-Technology

The lab version of the LUMiFlector is placed either at-line directly besides the production line or in the QA/QC lab. Application fields for At-line LUMiFlector include dairy products, pharmaceutical products, medical nutrition and biotechnology.

The innovative MRS-Technology is the basis for measuring the product parameters with the LUMiFlector. This technology determines the sample composition based on sample specific optical properties.

MRS-Technology represents Multi Reflectance Spectroscopy. Light of different wavelengths is sent into the sample. After interaction with scattering, reflecting and fluorescing components, the returned light is collected at different angles and processed further.

More than 100 measuring signals are recorded and used by LUM to perform the optimum calibration for your application. This tailor-made calibration is specific for your product. At any time extensions for new products can be made easily. Due to MRS-Technology, the LUMiFlector operation is extremely flexible and fast.

At-line

- No pre-treatment
- Consumable-free: no chemicals, no costs, no waste
- Clean easily (use only water and soap)
- Easy handling, measurement, installation & operation
- Use intuitively after short training
- Measure quickly (20 seconds)
- Small dimensions
- Device can be calibrated for many applications (curd, biological cells,…)
- Usable in laboratory, at-line and inline
- Robust, can be placed at production site

Applications

- Standardization of fat content in milk
- Control of whey concentration or skimmed milk for the production of protein concentrate
- Determination of dry matter in ketchup production
- Monitoring of dry matter in enteral nutrition solutions
- Monitoring of cell concentration & condition of the culture medium in cell cultures
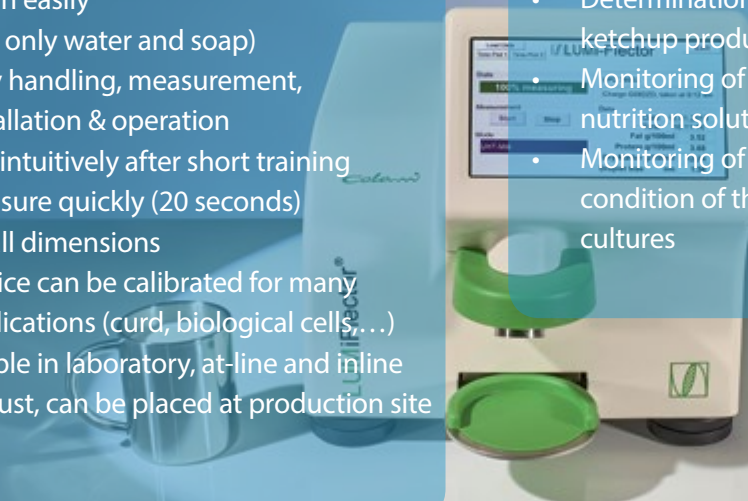
Inline version with MRS-Technology

The Inline LUMiFlector is directly connected with the pipe. The light is sent through a protection window into the flowing product, there is no direct sample contact nor contamination. Application fields for Inline LUMiFlector include dairy products, pharmaceutical products, medical nutrition and biotechnology.

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Inline   Applications

- Flexible in installation
- Can be calibrated for up to 8 products, up to 4 parameters per product
- Fast measurement
- Requires no special cleaning procedure
- Built directly into pipe or tank, no bypass
- Up to 6 bar, up to 10 bar without sample valve
- With operating unit
- Process connection: VARILINE® housing 4x 4-20 mA analogue input and exit each, 4x digital 24V output
- Touchless, only optical window needed

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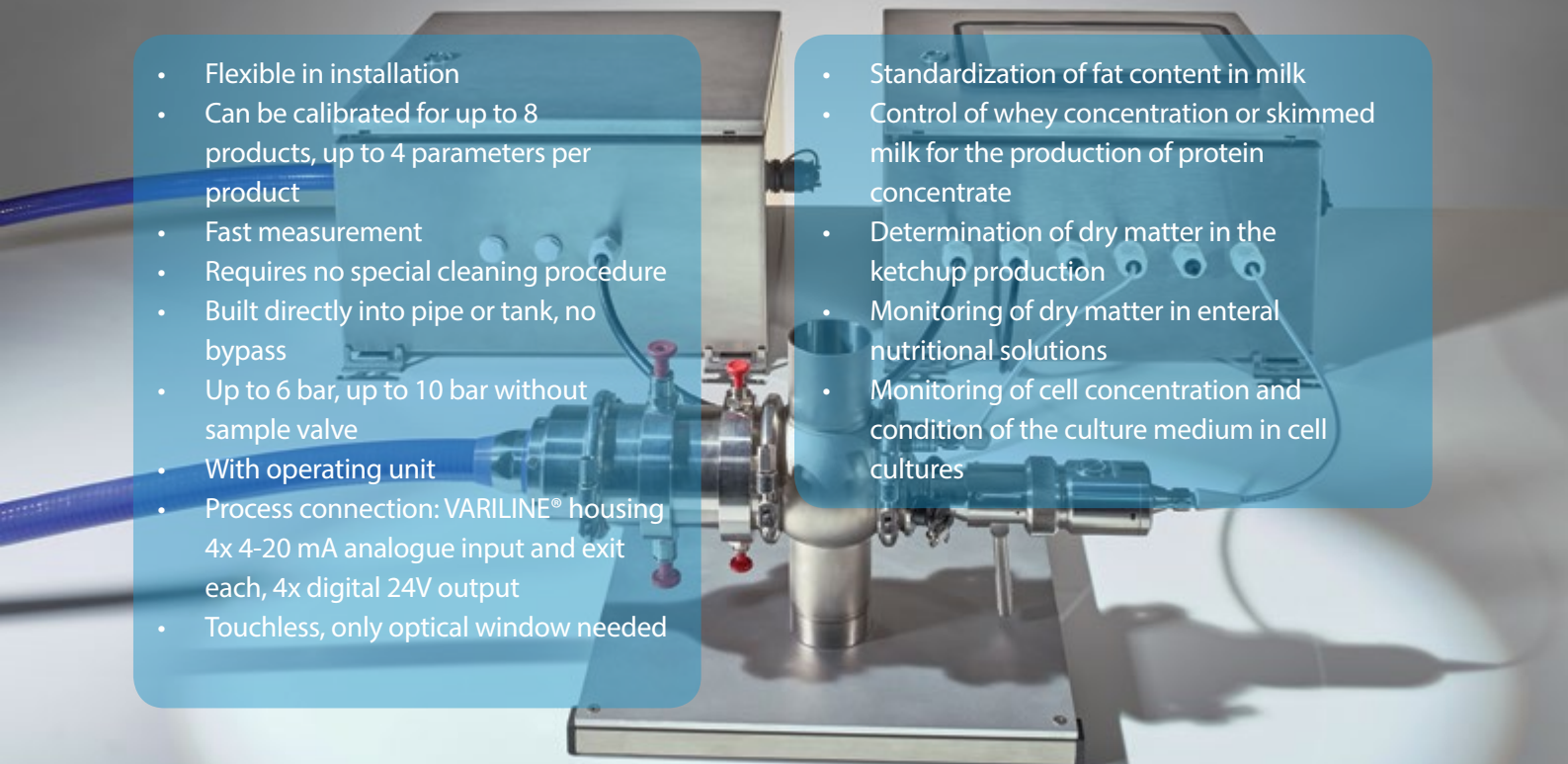
Specifications

Measuring principle	Scattering, Refraction, Fluorescence
Measurement time	20s
Measured properties	Fat (%), Protein (%), Dry matter, Droplet size
Precision	0.03% /0.06% (+/-absolut)
Samples	Emulsions, Suspensions (i. e. dairy products)
Volume	70 - 200 ml
Light source/detector	UV-NIR
Measurement cup	Stainless steel (customer's own light-proof container can be used optionally)
Calibrations (on-board)	i. e. Fat, Protein (milk), Dry matter (curd)
Ambient temperature	10-35 °C
Dimensions (W x H x D), Weight	28.5 x 24.5 x 52 cm³, 12.5 kg

Data	
Date	10.01.2019
Time	16:11:14
Fat g/100ml	3,52
Protein g/100ml	3,68
Dry Matter g/100ml	12,24

RIFERIMENTO PER L'ITALIA

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Subject to change.