

Quality and improved yield





What it does for you

The **SpectraAnalyzer DAIRY** is a dairy analyzer and quality check instrument, which is the ideal solution for routine analysis of major quality parameters during the production of dairy products.

In modern dairy processing operations, reliable and accurate dairy analysis solutions are required to provide customers with products of highest and – what is most important – consistent quality. In order to be most competitive in the world market, consistent high yields, top quality and low production costs are the objectives that need to be achieved. Below listed are some products and parameters where the **SpectraAnalyzer DAIRY** is most commonly used.

Designed as a modular system, the SpectraAnalyzer DAIRY solution presents the analytical results of these major quality parameters within 45 seconds:

- **Milk powder:** moisture, fat, protein, lactose, ash, acidity, SNF
- **Pre-mix and ice cream:** fat, lactose, SNF, MSNF, protein, carbohydrates and ash content
- **Butter and Spreads:** moisture, protein, fat, salt
- **Yoghurt:** fat, total solids, acidity and protein

There is no need to manually condition the sample and extra reagents do not have to be used so this analyzer solution provides **highly accurate quality control parameters** at no extra cost.

As a stand alone system, the SpectraAnalyzer DAIRY can be operated very easily and intuitively for dairy analysis and quality check, even close to the production line. The rugged construction and unique optical sample/reference setup ensures reliable operation in environments with fluctuating temperatures, vibrations and dust.

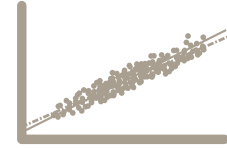
The SpectraAnalyzer DAIRY analyzer comes with many ready to use calibrations and a powerful software package to facilitate calibration fine tuning and extensive and automated logging as well as database storage of the analytical results on the analyzer, within the company intranet and/or the internet.

Key features



Versatile sample presentation

with closed, open, viscous, slide and disposable cups for powders, pastes, slurries and liquids.



Many mathematical models

for all kind of products included for quick calibration models installation and start-up.



NIR sample/reference technology

like all SpectraAlyzer instruments for high sensitive and long term stable measurements.



Touch user interface

and intrinsically mounted glass touch for straight forward hygienic instrument operation.



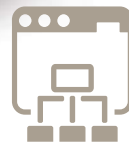
Compact design

optimised for bench top or at-line application.



User friendly

sample presentation and easy to operate.

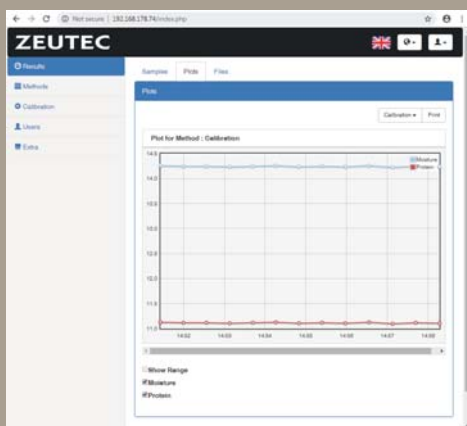
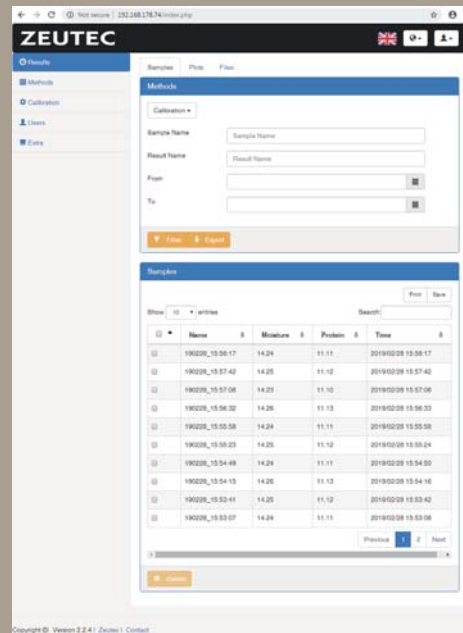


Web server connectivity

for direct instrument access via LAN and internet from anywhere, any time.

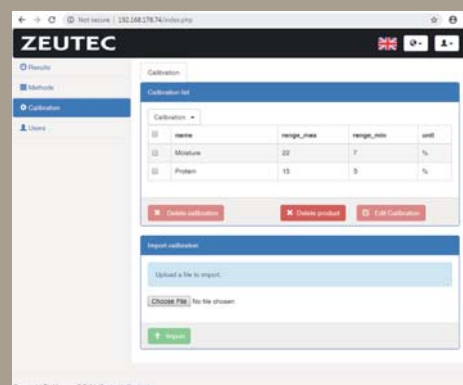
Online Electronic Lab Logbook

- Full sample and analytical results history
- Filter results by time or sample name
- Search for samples
- Export to Application Worx
- Copy, print or save (PDF / Excel) samples

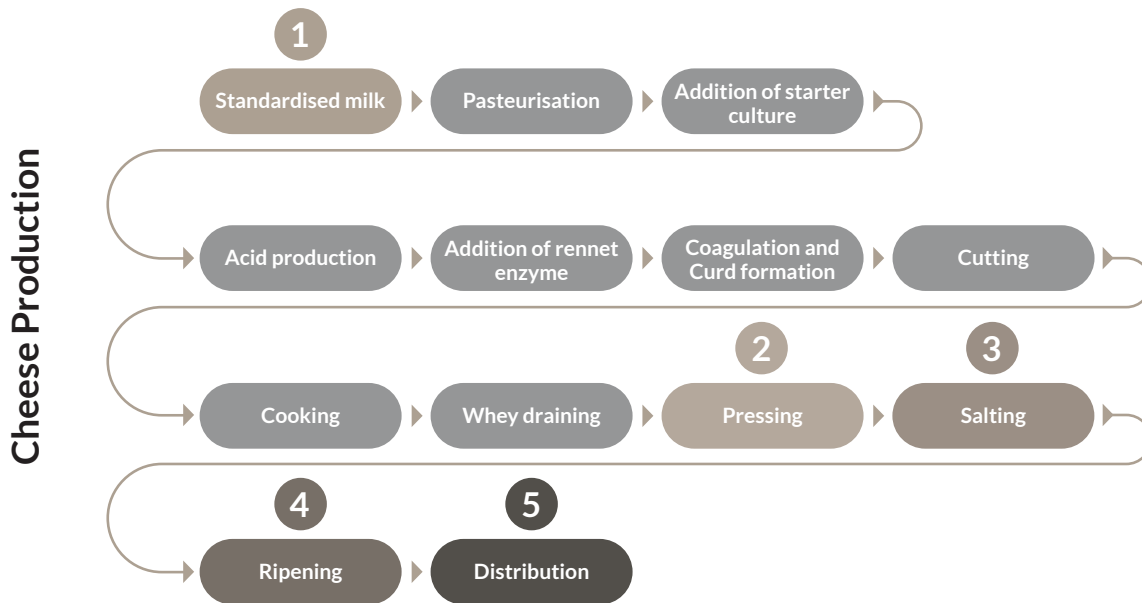


- Plot multiple properties as graph
- Select / deselect different properties

- Calibration management
- Import feature for new / updated calibrations



Production process flow diagrams



Standardized milk 1

Incoming milk is analysed for fat, protein, lactose, SNF, density, titrable acidity, casein and ash content.

This ensures the usage of a raw material composition according to set standards. The SpectraAnalyzer DAIRY as a fast analyzer is used to standardize the milk fat, protein and SNF content. The cheese making process can therefore be initiated more quickly.

Pressing 2

The moisture content determination with the SpectraAnalyzer DAIRY is important to adjust and monitor the cheese making process during pressing.

Salting 3

The salt content strongly affects the growth of bacteria during the ripening process. This salt content is measured in almost no time with the SpectraAnalyzer DAIRY.

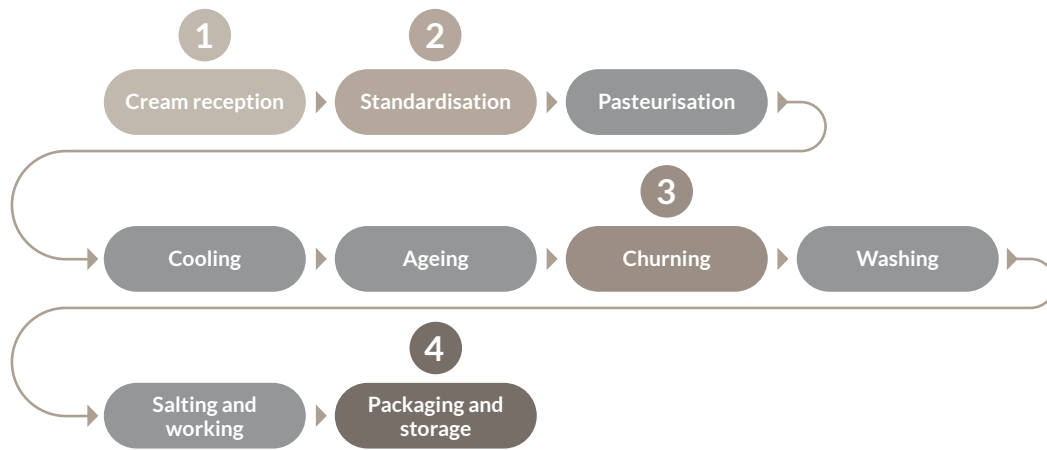
Ripening 4

The ripening process can be monitored with the analyzer by determining the moisture, free fatty acid and soluble nitrogen content.

Final product testing 5

For good and consistent quality in the final product as per set specifications, the fat, moisture, casein, SNF, salt, titrable acidity and dry matter can be determined with the SpectraAnalyzer DAIRY.

Butter Production



Cream reception 1

Fat, protein, lactose, total solids, titratable acidity, free fatty acids can be determined.

Complete quality assessment of the incoming cream facilitates the production according to the desired product specifications.

Standardisation 2

The cream is standardized to the desired fat content important for the final product quality.

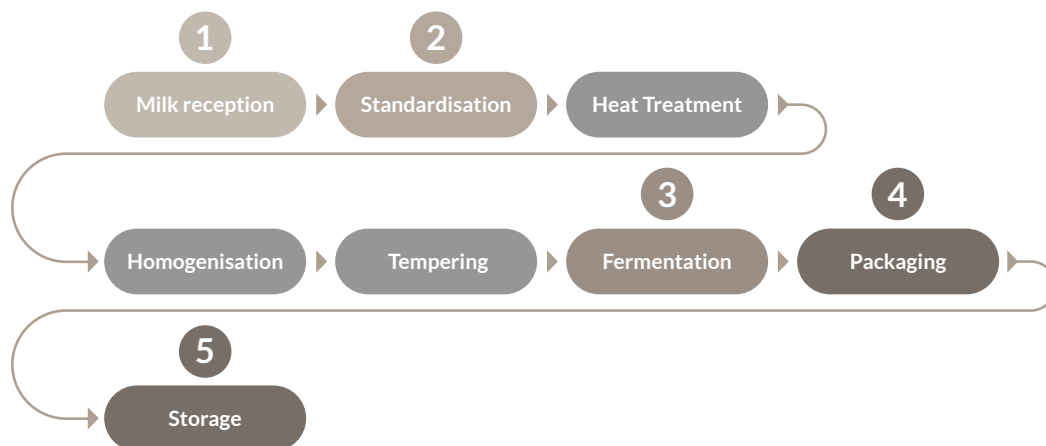
Churning 3

The churning process can be optimized by measuring the correct moisture and fat content with the SpectraAlyzer DAIRY.

Final product testing 4

Moisture, fat, SNF, total solids, protein, free fatty acids, peroxide value and refractive index measurements with the SpectraAlyzer DAIRY allows final product quality control.

Yoghurt Production



Milk reception 1

Moisture, fat, protein, lactose, total solids, casein, titratable acidity content can be determined.

Standardisation 2

The fat and protein content of the milk is standardized to create the desired end product. Different levels of fat are required in different products (non fat, light fat or whole fat yoghurts). The protein content is also standardized to reach the level needed for reducing syneresis.

Fermentation 3

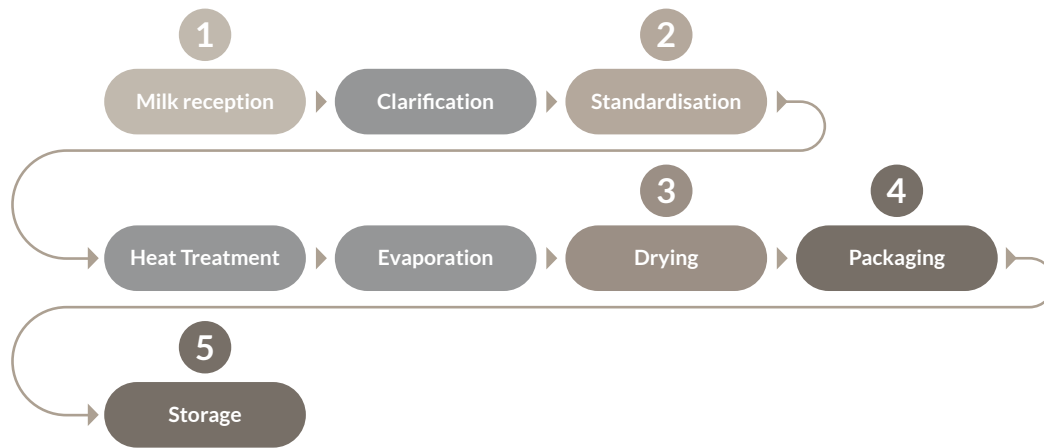
The fermentation process can be monitored by measuring lactose, lactic acid with the SpectraAlyzer DAIRY. When the desired acidity level is reached, the fermentation process can be stopped.

Final product testing 4 5

The fat, total solids, acidity and protein content is determined.

The SpectraAlyzer DAIRY is used for the quality control of the final product.

Milk Powder Production



Reception 1

Moisture, fat, protein, lactose, total solids, casein, titratable acidity can be determined in liquid milk.

This ensures the use of an adequate milk for producing high quality end products with a longer shelf life.

Standardisation 2

Fat and SNF standardization is important for ensuring that the downstream process is standardized with minimum variations. Different levels of fat are required for whole milk powders and skim milk powders which can be determined with the SpectraAnalyzer DAIRY.

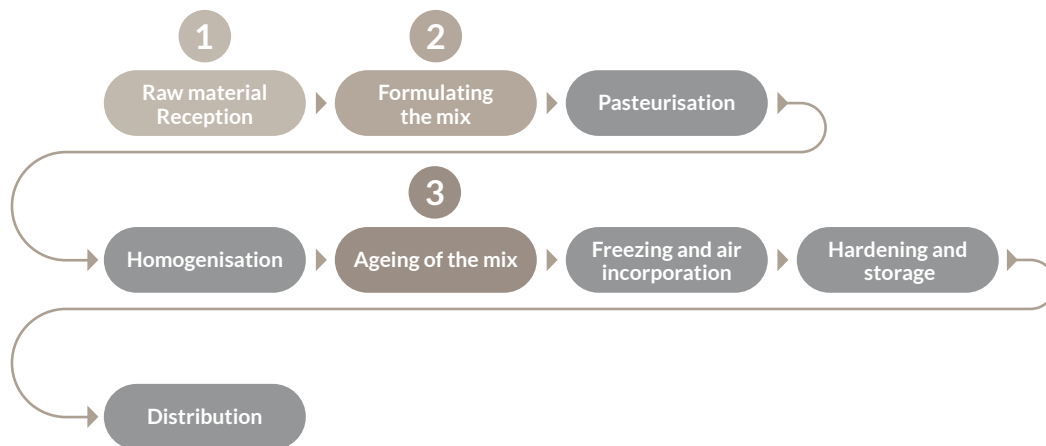
Drying 3

Moisture determination in the dried product ensures the rapid monitoring of the drying process and guides the operator to control the process in regard to the desired product specification.

Packaging and Storage - Final product testing 4 5

Moisture, fat, protein, lactose, ash, acidity, solids not fat, total solids measurement with the SpectraAnalyzer DAIRY ensures good and consistent quality according to the set product standards.

Ice Cream Production



Raw material Reception 1

Fat, protein, lactose, total solids, titratable acidity, free fatty acids can be determined.

Complete quality assessment of the incoming cream facilitates the production according to the desired product specifications.

Formulating the mix 2

The cream is standardized to the desired fat content important for the final product quality.

Ageing of the mix 3

The churning process can be optimized by measuring the correct moisture and fat content with the SpectraAnalyzer DAIRY.

Technical data

Design

Spectral range 1400 - 2400 nm

Dual beam system, Sample / reference measurement

High signal to noise ratio > 150.000 : 1

Large expandable internal memory for calibrations, methods and history results

Auto-diagnostics

Graphical user interface, projected capacitive glass touch panel

Optional Accessories

Keyboard, Barcode Reader, Printer, Application worx (AWX)

Analytical Performance

Please refer to commodity specific performance data sheet

Specifications

Screen	TFT 800 x 480 pixel
Power requirements	min. 90 V AC (50 - 60 Hz), max. 260 V AC (50 - 60 Hz), 220 VA
Operating temperature	5 °C - 35 °C non-condensing
Interfaces	1 x front USB 2.0, 3 x USB 2.0, 2 x RS232, Ethernet
Dimensions	Height: 310 mm / Width: 300 mm / Depth: 480 mm
Weight	17 kg

Order information

SpectraAlyzer DAIRY 110-A100-17

ZEUTEC Opto-Elektronik GmbH

Friedrich-Voß-Straße 11
24768 Rendsburg
Germany

(+49) 4331 - 136650
moreinfo@zeutec.de
www.spectraalyzer.com

ZEUTEC

SpectraAlyzer 
DAIRY