

MILK ANALYZER

BOECO MILK ANALYZER LAC-SP, LAC-SPA

The function of the BOECO Ultrasonic Milk Analyzer is to make quick analyses of milk samples directly after milking, at collecting and during processing.

The BOECO Milk analyzer makes quick analyses of milk and liquid dairy products as: Cow milk, UHT milk, Sheep milk, Goat milk, Buffalo milk, Camel milk, Whey, Cream (up to 45%), Skimmed milk (0,01% FAT, Ice-cream mixtures, Concentrated milk (up to 1160 kg/m³), Yogurt, Flavoured milk, Recovered milk.

Each unit will be delivered with 3 calibrations (standard are sheep, cow and UHT milk)

The model LAC-SP has one peristaltic pump for the sample aspiration. The model LAC-SPA has two pumps. The second one for automatic cleaning

The key features are:

- ▶ User-friendly: simple in operation, maintenance, calibration and installation
- ▶ Portable and compact design
- ▶ Very small quantity of milk required (25 ml per one measurement)
- ▶ Low power consumption
- ▶ No use of hazardous chemicals
- ▶ Measuring accuracy adjustment can be done by the user RS 232 interface
- ▶ ESC POS Printer Support
- ▶ Two samples self-calibration
- ▶ Dimensions 175x175x150 mm (WxDxH)
- ▶ Weight: < 1,5 kg
- ▶ Power: Input 100-240V ~1,6 A max, 50/60 Hz, Output +12V 4.17 A min

The following Parameters can be measured from the Ultrasonic system: Fat, Solid-non-fat (SNF), Density, Protein, Lactose, Milk sample temperature, Added water, Salts, Freezing point.

The following Parameters can be measured from integrated systems: pH (together with an electrode), Conductivity, Inhibitors

Parameter	Measuring range	Accuracy
Fat	from 0,01% to 25% (option 45%)	± 0.1%
SNF (Solids-non-fat)	from 3% to 15%	± 0.15%
Density	from 1015 to 1140 kg/m ³ (option 1160 kg/m ³)	± 0.3 kg/m ³
Protein	from 2% to 7%	± 0,15%
Lactose	from 0.01% to 6%	± 0.15
Added Water content	from 0% to 70%	± 3.0%
Temperature of milk	from 1°C to 40°C	± 1°C
Freezing point	from -0,4 to -0,7°C	± 0.001°C
Salts	from 0,4 to 1,5%	± 0.05%
pH	from 0 to 12	± 0,05%
Total solids	from 0 to 50 %	± 0,17%
Option		
Conductivity	from 3 to 14 (mS/cm)	± 0,05%

BOECO LAC-SP
BOECO LAC-SPA



BACKPANEL

Code	Description
BOE 5290800	BOECO LAC-SP-50 Milk Analyzer, Standard Plastic Model, 50 sec. measuring time, with pH measuring system, USB/RS 232 dataport
BOE 5290860	BOECO LAC-SPA-50 Milk Analyzer, Standard Plastic Automat with 2 peristaltic pumps inside (1 for the sample, 1 for the cleaning) 50 sec. measuring time, with pH measuring system, USB/RS 232 dataport
BOE 5291860	BOECO LAC-SPA-50 Milk Analyzer, Standard Automat Model 50 sec. measuring time, with pH measuring system and integrated Conductivity measurement, real time clock, USB/RS 232 dataport

Option:
BOE 5451160 High-fat (45%) / Density 1160 kg/m³ measuring function

BOECO MILK ANALYZER LAC-S, LAC-SA

The function of the BOECO Ultrasonic Milk Analyzer is to make quick analyses of milk samples directly after milking, at collecting and during processing.

The BOECO Milk analyzer makes quick analyses of milk and liquid dairy products as: Cow milk, UHT milk, Sheep milk, Goat milk, Buffalo milk, Camel milk, Whey, Cream (up to 45%), Skimmed milk (0,01% FAT, Ice-cream mixtures, Concentrated milk (up to 1160 kg/m³), Yogurt, Flavoured milk, Recovered milk.

Each unit will be delivered with 3 calibrations (standard are sheep, cow and UHT milk)

The standard model LAC-S has one peristaltic pump for the sample. The LAC-SA models have two pumps. The second one for automatic cleaning.

- ▶ Direct measurement of cold milk samples, starting at 5°C
- ▶ No need of periodical calibration
- ▶ The measurement accuracy is not dependant on milk's acidity
- ▶ High-end ultrasonic technology for analyzing any kind of milk
- ▶ Dimensions 100x223x216 mm (WxLxH)
- ▶ Weight: < 3 kg
- ▶ Power: Input 100-240V ~1,6 A max, 50/60 Hz, Output +12V 4.17 A min

The following Parameters can be measured from the Ultrasonic system:
Fat, Solid-non-fat (SNF), Density, Protein, Lactose,
Milk sample temperature, Added water, Salts, Freezing point

The following Parameters can be measured from integrated systems:
pH (together with an electrode), Conductivity, Inhibitors

Parameter	Measuring range	Accuracy
Fat	from 0,01% to 25% (option 45 %)	± 0.1%
SNF (Solids-non-fat)	from 3% to 15%	± 0.15%
Density	from 1015 to 1140 kg/m ³ (option 1160 kg/m ³)	± 0.3 kg/m ³
Protein	from 2% to 7%	± 0,15%
Lactose	from 0.01% to 6%	± 0.15
Added Water content	from 0% to 70%	± 3.0%
Temperature of milk	from 1°C to 40°C	± 1°C
Freezing point	from -0,4 to -0,7°C	± 0.001°C
Salts	from 0,4 to 1,5%	± 0.05%
pH	from 0 to 12	± 0,05%
Total solids	from 0 to 50 %	± 0,17%
Option		
Conductivity	from 3 to 14 (mS/cm)	± 0,05%

Code	Description
BOE 5290090	BOECO LAC-S-50 Milk Analyzer, Standard Model, 50 sec. measuring time, with pH measuring system USB/RS 232 data port, USB flash drive
BOE 5290950	BOECO LAC-SA-50 Milk Analyzer, Standard Automat (2 pumps) , 50 sec. measuring time, with pH measuring system, USB/RS 232 data port, USB flash drive
BOE 5291950	BOECO LAC-SA-50 Milk Analyzer, Standard Automat (2 pumps) , 50 sec. measuring time, with pH measuring system and integrated Conductivity measurement, real time clock USB/RS 232 data port, USB flash drive

Option:
BOE 5451160 High-fat (45%) / Density 1160 kg/m³ measuring function

Accessories

Code	Description
BOE 5290020	Thermal Printer
BOE 5095626	Basic pH combination electrode BA 17, liquid electrolyte, 0...14 pH, 0...100°C, with BNC plug, 1m cable. With leak proof refill opening, platinum diaphragm

USB
FLASH
DRIVE

BOECO
LAC SA 50



Results
F=03.02 S=07.93
D=28.55 P=02.90
L=04.35 W=04.23

Measurement
results



BOECO LAC-SA
with 2 peristaltic
pumps inside,
1 for cleaning, 1 for
sample

USB dataport

input for alkaline detergent for automatic
cleaning on every hour

The optional built-in conductivity
sensor gives high performance
freezing point analysis - avoid poor
quality milk due to added water,
detects mastitis and falsification with
added salt

