

# EKOMILK®

## Spectra

Hybrid Mid-Infrared Ultrasonic  
Milk Analyzer



Most affordable milk analyzer  
with MIR adulteration detection capabilities  
**Fast, Highly Sensitive Detection  
of Adulterant Concentrations**

### Key feature:



- Fast adulterant detection & Fat, SNF, etc. corrections
- Cost effective
- Simple and lightweight design
- Automatic cleaning of the IR module
- No acids or other chemicals used
- Data collection system
- 4.3" color TFT Display with resistive touch screen
- RS232, USB, GPRS, Bluetooth, Wi-Fi, Ethernet interfaces
- USB flash drive, keyboard & mouse support
- Multi-language menu translations
- Remote calibration procedure
- Remote firmware update
- pH Measurement module (optional)
- Measurement data print-out (optional)
- Data processing & payment system (optional)
- Custom calibration - goat, sheep, camel, llama, etc.
- No moving parts



WIPO | PCT

International patent application WO2018/148809  
CUVETTE FOR ANALYSIS OF FLUID FOOD PRODUCTS.

### Application Area:

- Dairy farms
- Milk collecting points
- Dairy industry
- Veterinary and dairy laboratories

## What is the Real Quality of Your Milk?





# EKOMILK<sup>®</sup>

Spectra

Hybrid Mid-Infrared  
Ultrasonic Milk Analyzer

BULTEH  
2000

## Environmental Conditions:

Ambient air temperature	15° ÷ 35°C
Milk temperature	5° ÷ 35°C
Relative humidity	30% ÷ 80%

## Electrical Parameters:

AC Power Supply voltage	INPUT: 100 - 240VAC +10/-15% 50/60 Hz %
Power Consumption	< 50 W

## Mechanical Parameters:

Dimensions (W x D x H)	380 x 310 x 285 mm
Weight	Weight < 4.5 kg

## Measuring Parameters:

Average time per 1 measurement	45 sec.
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Specific Adulteration Detection (Mid-infrared)*:	Limits of Detection %
Ammonium Sulfate	0.10 ± 0.05 (abs.)
Urea	0.20 ± 0.05 (abs.)
Melamine	0.10 ± 0.05 (abs.)
Nitrates (ammonium, potassium, sodium, ...)	0.05 ± 0.03 (abs.)
Carbonates/Bicarbonates (ammonium, potassium, ...)	0.08 ± 0.05 (abs.)
Sweeteners (sucrose, maltodextrin, sorbitol, ...)	0.7 ± 0.25 (abs.)
Added Water	20 ± 5 (abs.)
Synthetic Milk (veg. oil, detergent, urea, water)	20 ± 5 (abs.)
Vegetable Fat	1.5 ± 0.5 (abs.)

## Adulteration Detection (non-specific adulterants)

*In case the milk has been contaminated  
with substantial volume of unknown adulterant  
the instrument could detect it*

*\*Adulterants detection limit: in the range of milk fat 1.5% to 12%*

## Parameters (Ultrasonic):

Fat	0.5% ÷ 12% ± 0.1% (abs.)
Solids non Fat (SNF)	6% ÷ 12% ± 0.2% (abs.)
Milk Density	1.0200 ÷ 1.0400 g/cm <sup>3</sup> ± 0.0005 g/cm <sup>3</sup> (abs.)
Protein	2% ÷ 6% ± 0.2% (abs.)
Freezing Point	0 ÷ -1.000 °C ± 0.01°C (abs.)
Added Water to Milk	0% ÷ 60% ± 5% (abs.)

Note: EKOMILK SPECTRA is factory calibrated for cow, buffalo, mixed milk. Customized calibration for goat, sheep, camel, llama milk is available under customer's request.

*\*All the specifications are preliminary and can be changed without prior notice.*

## MANUFACTURER:

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