

# Bentley 150

## Precision Infrared Milk Products Analysis

The Bentley 150 is a compact, highly accurate instrument for the analysis of milk and milk products.

- Analyzes dairy components including fat, protein, lactose and solids
- Up to 150 samples per hour
- Handles products of high viscosity
- Flexible data output options
- Optional autosampler for fully automatic operation
- Available with Fat "A" and Fat "B"
- Optional freezing point depression (FPD)
- Low maintenance design

**Accurate, compact, fast and reliable, the Bentley 150 is ideal for labs with small to medium testing requirements.**

**BENTLEY**  
INSTRUMENTS

*Analytical  
Instruments For  
The Dairy Industry*



### Technical Overview & Principle of Operation

The Bentley 150 consists of a proprietary optical infrared analysis system and an integrated high speed computer. To measure specific components within milk products, the instrument measures the energy absorption at specific wavelengths in the mid-IR region.

- ◆ Operators use computer controls to vary the pump and analysis speed, directing the system to operate at a slower speed when processing products of high viscosity such as cream.
- ◆ Programmable screen layout allows the operator to choose up to 8 windows to display component values both measured and calculated.
- ◆ The instrument is capable of handling multiple calibrations as needed to optimize accuracy in testing different components.
- ◆ Operator friendly software with graphic user interface (GUI) help make the system easy to operate.
- ◆ The flexible design of the instrument allows it to be used as a product analyzer capable of testing a wide variety of fluid dairy products.
- ◆ Instrument durability allows for use in high volume testing environments.
- ◆ State-of-the-art design utilizes few moving parts, making the system very easy to maintain.
- ◆ Small, compact size and integrated computer reduces the amount of bench space needed, allowing the system to be used in the smallest of labs.

# Bentley 150: Accurate, Dependable and Easy To Maintain

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INSTRUMENTS



## Innovative Design

- ◆ Computer controls allow the operator to adjust the speed of the system for testing products of high viscosity.
- ◆ Easily handles multiple calibrations to optimize accuracy in testing different products.
- ◆ Highly accurate analysis of energy absorption at specific wavelengths of the mid-IR region.
- ◆ Programmable screen layout allows the operator to choose up to 8 windows to display component values both measured and calculated.

## Optional Automated Sample Input

With the optional automated sample handling, the Bentley 150 will provide a complete and highly automated lab procedure, where the work process is easily incorporated into the routine.

- ◆ The auto-sampler can handle most standard vial sizes
- ◆ Optional bar-code readers can be attached to the input tray for automatic sample identification

## Data Output To Screen, Printer or Network

Measurement data from the Bentley 150 can be printed on almost any type of printer via the serial & parallel ports. Multiple data output options support most of the standard host-remote solutions used in the industry today.



\*Specifications for typical raw milk samples.

# Combination Model



## Bentley 150 Combi

The Somacount 150 and the Bentley 150 can be connected to form a combination system offering simultaneous infrared and somatic cell count analysis. The result is significantly improved laboratory efficiency and faster sample analysis. Bentley combination models are available in many different configurations to meet the needs of any testing facility. Please contact us for more information on these models.



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## Service and Support

Delivering a superior level of customer support has always been a top priority at Bentley Instruments. From onsite training and installation to long term technical support, our experienced staff of engineers is there to help you maintain the highest level of productivity.

## Bentley 150 Specifications\*

### Measurement Range:

0 - 50% for Fat                      0 - 15% for Protein  
0 - 15% for Lactose                0 - 60% for Solids

### Repeatability: < 0.5% C<sub>V</sub>

### Accuracy

Fat:                      C<sub>V</sub> < 1.0% against Mojonnier  
Protein:                C<sub>V</sub> < 1.0% against Kjeldahl  
Lactose:                C<sub>V</sub> < 1.0% against Polarimeter  
Solids:                    C<sub>V</sub> < 1.0% against drying oven

### Speed:                      150 per hour

Electrical:                115 Volts - 60Hz - 6 Amps  
                                  230 Volts - 50Hz - 4 Amp

### Dimensions:

Width: 52.0 cm                      Depth: 38.0 cm  
Height: 38.0 cm                      Weight: 50.0 kg

\* Specifications for typical raw milk samples.