



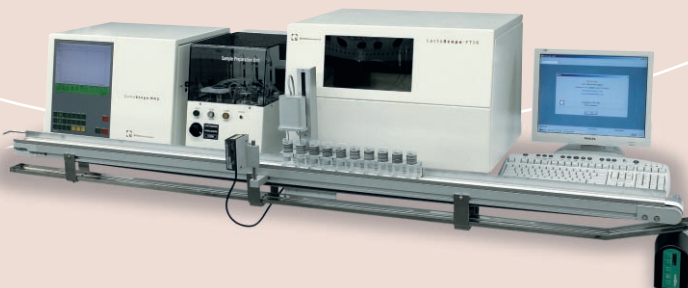
DeltaInstruments

Over 20 years dedicated to quality assurance in dairy

CombiScope™ FTIR

CombiScope™ FTIR

Infra red precision FTIR analyser for unpasteurized milk with integrated high-speed tester for accurate quantifying of somatic cells.



Delta Instruments

Benefits

- ▲ Automated cleaning and calibration control
- ▲ Software-controlled by DataScope™ PC software
- ▲ Easy maintenance and rapid upgrading due to modular construction
- ▲ Cost effective and proven reliability
- ▲ Outstanding calibration transferability through patented FTIR technology
- ▲ Closed circuit 'Sample Preparation Unit' for the most accurate measurements of somatic cells
- ▲ CombiScope™ FTIR 400 samples per hour
- ▲ Rack system adjustable to the system of the customer

Specifications

SOMASCOPE

- ▲ **Employed technique:** Fluorescence flow cytometry – staining with DAPI
- ▲ **Fluid system:** Sampler utilising fixed volume loop injection, staining through mixing at room temperature in self-rinsing (rotating) cups, with cells counted in an absolute volume
- ▲ **Measuring speed:** 200/400 samples per hour
- ▲ **Accuracy (Cv **):** < 10% relative to Direct Microscopic Somatic Cells Count
- ▲ **Repeatability (Cv **):** < 6% at 10⁵ cells/ml
4% at 3x10⁵ cells/ml
< 3% between 0.4 - 1x10⁶ cells/ml
- ▲ **Measuring range:** up to 10⁷ cells/ml
- ▲ **Sample volume:** typical 2 ml
- ▲ **Sample temperature:** 40 degrees Celsius
- ▲ **Carry-over:** < 1%
- ▲ **Sample condition:** fresh or preserved

- ▲ **System dimensions (incl. conveyor belt) (HWD) total:**
41x206x44 cm
- ▲ **Total power supply:**
110-230 Volt 50-60 Hz, 900 VA

Approvals/Standards

- ▲ Electric Compatibility Directive 89/336/EEC
- ▲ Low Voltage Directive 73/23/EEC
- ▲ IDF 148 A
- ▲ IDF 141 C

* Please contact Delta Instruments for application notes.

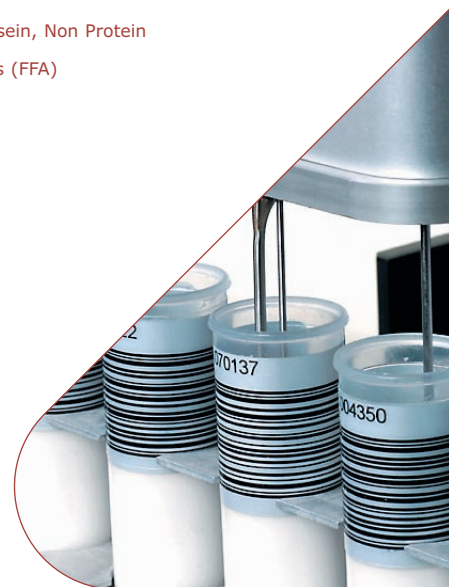
** Coefficient of variation equal to the standard deviation divided by the average value for the sample(s) tested, times 100. Röse Gottlieb for fat, Kjeldahl for protein, HPLC for lactose and Oven Method for total solids.

The CombiScope™ FTIR is a dedicated analyser designed for herd recording and payment control. This combination of a LactoScope™ and a SomaScope™ allows for the compositional analysis and somatic cell count of milk, based on Fourier transform infra red (FTIR) and flow cytometry respectively.

Dedicated State-of-the-Art Analysers from the number one dairy country in the world. Quality assured from Delta Instruments, The Netherlands.

LACTOSCOPE FTIR

- ▲ **Employed technique:** FTIR transmission spectrophotometry
- ▲ **Standard parameters:** Fat, Protein, Lactose, Solids
- ▲ **Additional parameters (*):**
Freezing point depression, True protein, Casein, Non Protein Nitrogen (NPN), Citric Acid, Free Fatty Acids (FFA)
- ▲ **Measuring speed:** 400 samples per hour
- ▲ **Repeatability (Cv **):** 0.25 %
- ▲ **Accuracy typically (Cv **):** ≤ 1% (bulk samples from cow milk)
- ▲ **Purging efficiency** ≥ 99% (programmable correction possible)
- ▲ **Sample volume:** typical 8 ml
- ▲ **Sample temperature:** 40 degrees Celsius



CombiScope™ FTIR



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