

The Next Generation of Milk Analysis



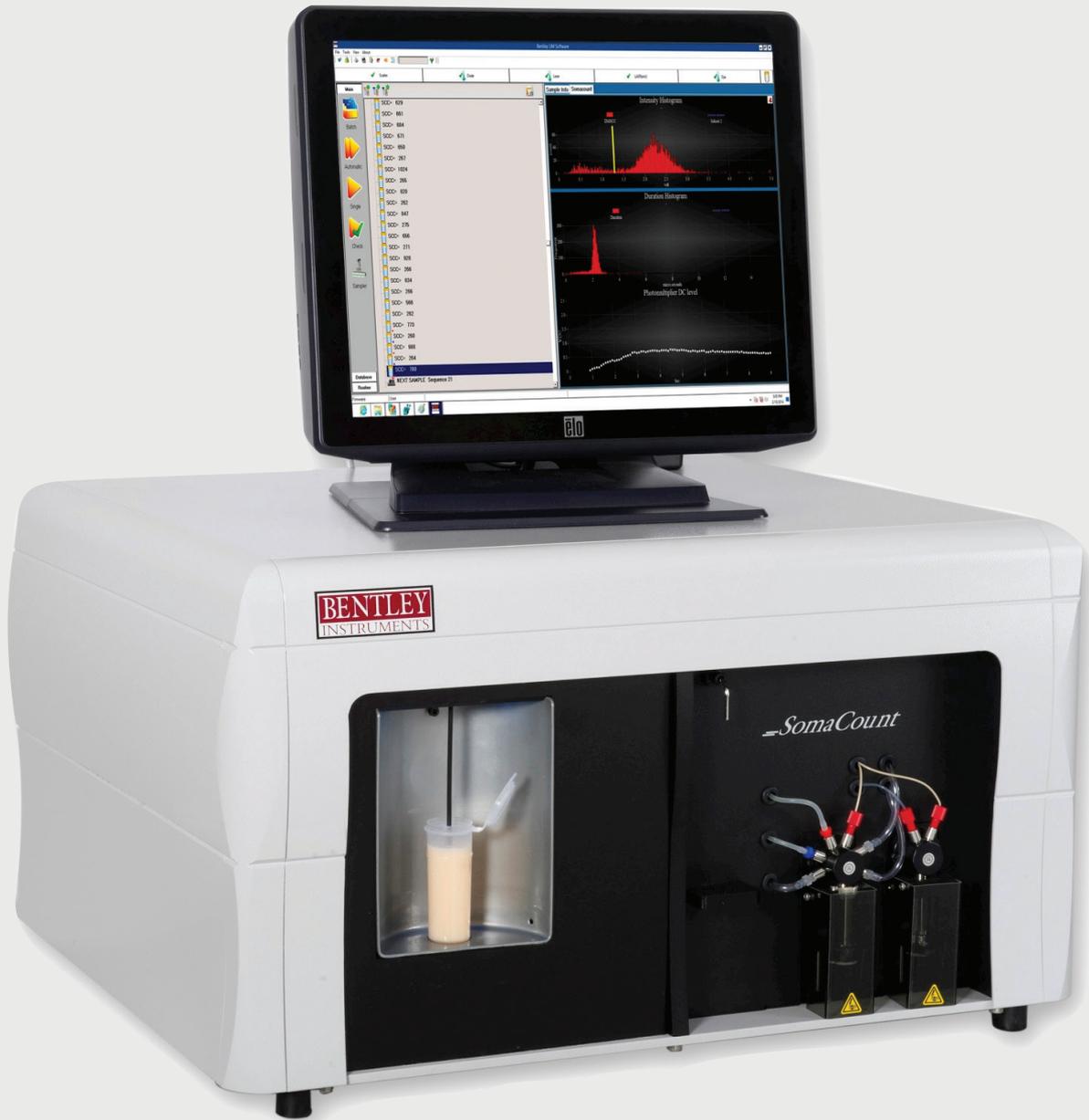
BENTLEY
INSTRUMENTS

NEXGEN SERIES

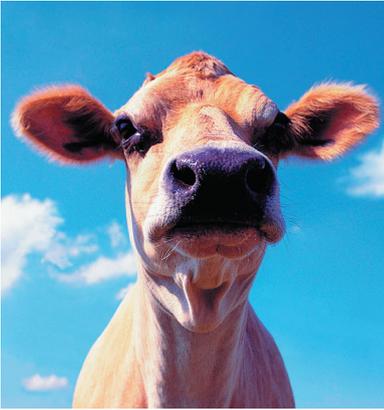
SomaCount™ FC

SOMATIC CELL COUNTER FOR RAW MILK

SOMACOUNT™ FC



Precision counting of somatic cells in all raw milk products



“SomaCount™ somatic cell counters have helped companies meet the requirement demands of consumers and regulatory agencies around the world by providing the most precise and accurate measurements for milk analysis.”

THE LATEST INNOVATION IN THE NEXGEN SERIES

The SomaCount™ FC - A highly reliable, easy to use, extremely accurate somatic cell counter designed for raw milk.

The Bentley NexGen Series is designed for a wide range of dairy laboratories and processing facilities that need a highly accurate instrument for the analysis of dairy components, including somatic cell counts. Engineered in accordance with Bentley Instruments' rigorous design principles and quality management systems, the SomaCount™ FC provides precise and accurate measurements, and exceptional reliability.

TECHNOLOGY EXECUTIVE SUMMARY

Bentley Instruments' SomaCount™ FC Somatic Cell Counter uses a proprietary method of laser-based flow cytometry for somatic cell counts. The SomaCount™ FC is the next innovation in the evolution of our world-renowned instruments for somatic cell counting. Based on a highly stable solid state laser induced fluorescence, this module is capable of delivering an accurate and timely warning for mastitis onset. Like all the instruments in the NexGen series, the somatic cell counting data is permanently saved into the local database.

THE STANDARD OF BENTLEY INSTRUMENTS

For over 30 years, Bentley Instruments has been a leader in the development of highly accurate and robust milk analysis equipment. Founded in 1983, Bentley Instruments has earned a reputation for developing innovative dairy analysis solutions that are both highly reliable and accurate. We provide the highest level of support, from web-enabled instrument monitoring and diagnostics analysis to onsite and telephone support. We understand the workflow demands of a modern dairy processing facility and do whatever it takes to keep your operation moving, no matter where in the world your laboratory is located.

APPLICATIONS

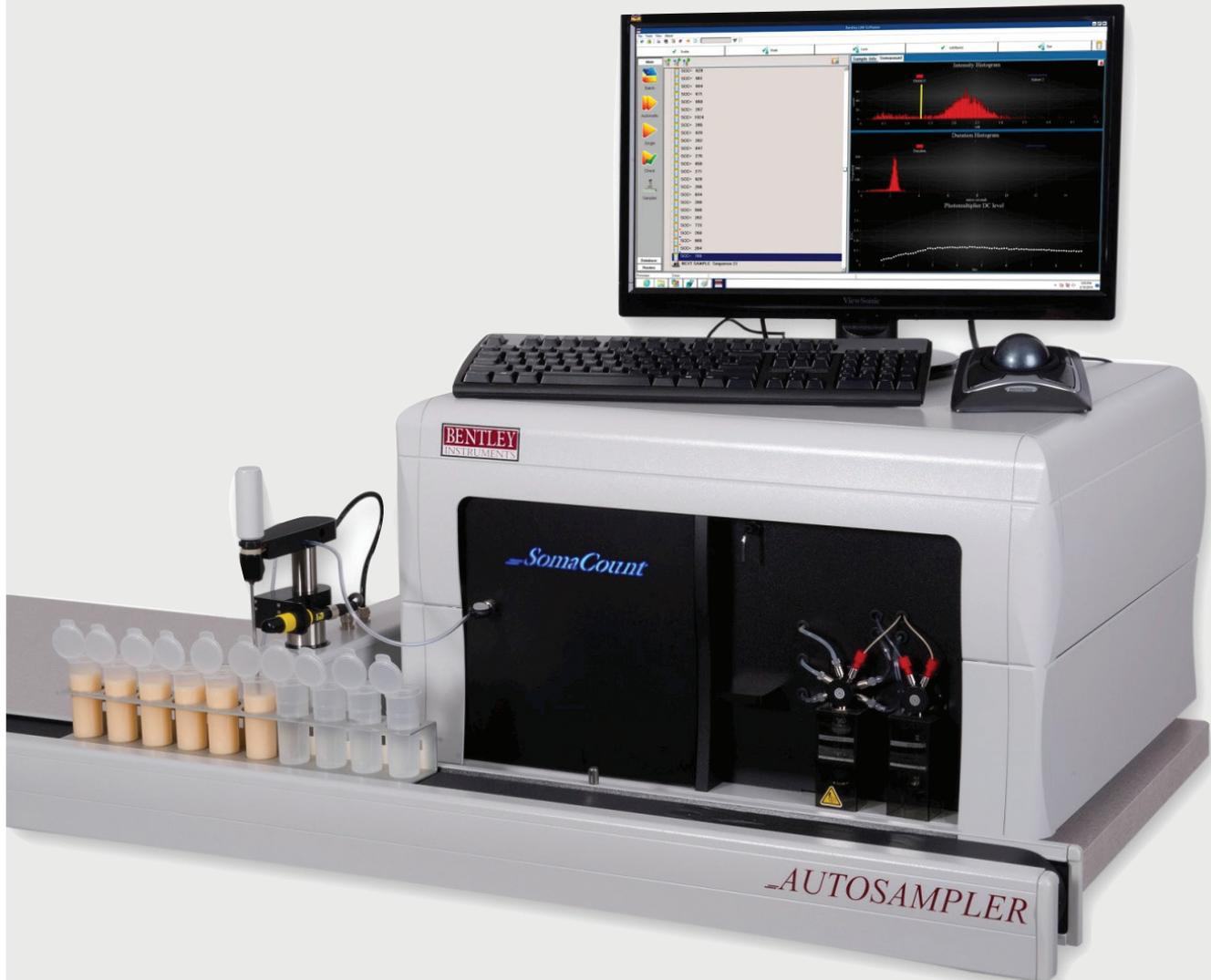
The SomaCount™ FC is designed and engineered for dairy plants and laboratories that require a highly reliable and accurate instrument for performing somatic cell count testing on raw milk samples. With the addition of an automated sampling system, the SomaCount™ FC can be used by mid-sized laboratories requiring a higher throughput fully automated instrument to meet their daily testing requirements.

SERVICE AND SUPPORT

Delivering a superior level of customer service has always been a top priority at Bentley Instruments. We understand the importance of making sure your laboratory is producing results, 24 hours a day, 7 days a week.

Our experienced staff of engineers provides on-site training, installation and service, as well as web-based remote support to help you maintain the highest level of productivity.

The new SomaCount™ FC delivers a rapid and accurate measurement of somatic cell counts for early mastitis detection in raw milk. This proven system is designed for reliability, ease of use and precision measurements. This instrument is ideal for small to mid-size laboratories that need an easy-to-maintain and robust somatic cell counter.



SOMACOUNT™ FC FEATURES AND BENEFITS

- Proprietary process based on the principle of fluorescence based flow cytometry.
- Flexible data output options.
- Optional Automated Sampling System for fully automated analysis.
- Low maintenance and cost of ownership.
- Excellent instrument standardization and quality control with Bentley lyophilized somatic cell standards.
- Integrated auto rinse/clean functions.
- Operator friendly software with graphic user interface (Windows) make the system easy to operate.
- Highly accurate: Meets all the requirements of ISO 13366/IDF 148 standards for somatic cell counting.
- Up to 300 samples/hour. Can be combined with DairySpec FT for simultaneous milk component and somatic cell analysis.

SOMACOUNT™ FC TECHNOLOGY

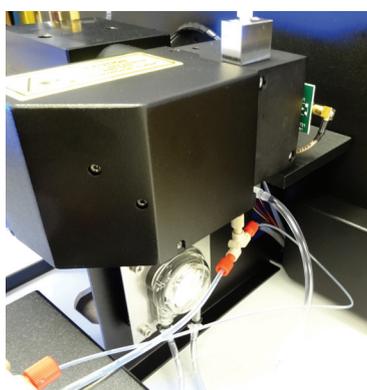
The SomaCount™ FC incorporates the latest technology with the most advanced software.



Network based design enables complete connectivity and remote access.



Clean compact flow cytometer design based on a highly stable solid state laser offers extremely accurate and reliable results.



Open design allows for easy access to injection needle along with easy cytometer maintenance.



Easy access sample entry module for manual operation.

The SomaCount™ FC uses a proprietary process based on the principle of laser-based flow cytometry to determine the somatic cell count in raw milk. Flow cytometry is an extremely powerful and versatile technique that is the method of choice in the medical field for detecting, analyzing and sorting cells. The SomaCount™ FC is the result of more than 20 years of experience and research in flow cytometry as the first instrument was developed in 1991.

The milk sample is first treated with a proprietary buffer solution that stains the milk somatic cells with a fluorescent dye. This solution is then injected into the flow cytometer where hydrodynamic focusing ensures that the stained somatic cells intersect an intense laser beam, which causes the cells to emit fluorescent light. This fluorescent light is then collected and detected. Post-analysis of histograms that show the heights and widths of the electronic pulses results in the total somatic cell count. The histograms are recorded and archived so they may be recalled in the future in the event that further data analysis methods become available.

A more powerful and reliable diode-pumped solid-state laser replaces the gas laser of previous generations. Laser power is monitored and recorded for stability.

With the SomaCount™ FC, instrument control is integrated into a single Windows based software program. The simple and intuitive graphical user interface is designed for easy operator use. The software's sophisticated data export and reporting functions along with network access capability allow lab supervisors to monitor instrument status and analyze results remotely.

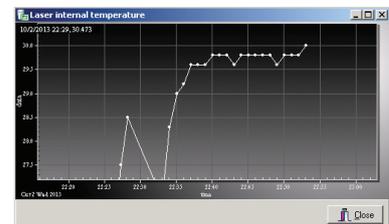
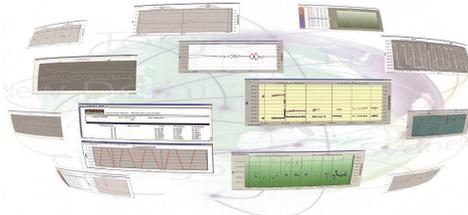
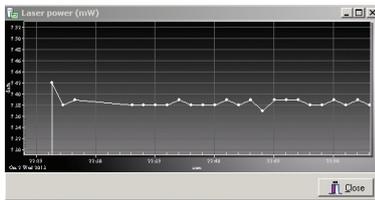
Extensive diagnostics are collected so the user can be assured the instrument was performing optimally when the sample data was taken. And because a full set of diagnostic readings is stored with each sample tested, an audit trail exists to validate the state of the instrument during data collection.

Should a problem develop with the instrument, immediate assistance from Bentley Instruments' service personnel can be greatly facilitated by reviewing these instrument diagnostics. Bentley Instruments' service staff can also log onto the instrument remotely to further aid in troubleshooting.

The SomaCount™ FC exceeds the IDF 148/ISO 13366 Standard and ICAR requirements for Somatic Cell Counting and uses AOAC approved methodology.

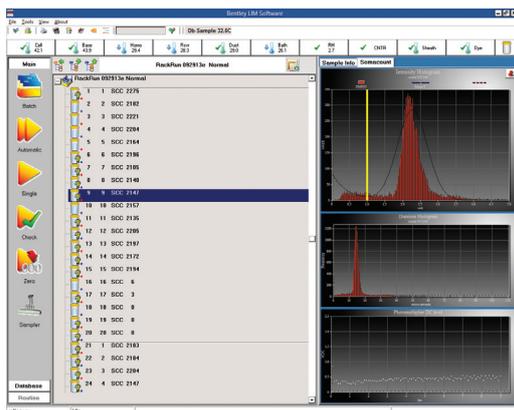
REMOTE DIAGNOSTIC CAPABILITIES

The web-enabled diagnostic features of the NexGen Series allows Bentley Instruments to access the SomaCount™ FC from any location. This enables your laboratory personnel and Bentley Instruments engineers to collaborate and analyze all system functionality, no matter where the instrument is located.



REAL TIME MILK QUALITY ANALYSIS AND REPORTING

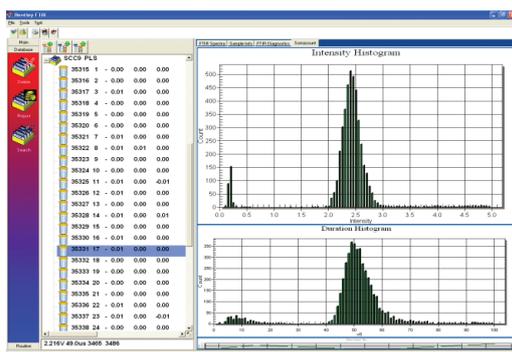
The SomaCount™ FC presents results and diagnostic information for easy analysis along with customizable analysis reports and output options.



5/18/2014 12:02:29 PM		Instrument: 87004000 Operator: USER		BENTLEY INSTRUMENTS	
Batch: milk	Lab1:	Ex1:			
Date Tested: 5/18/2014	Lab2:	Ex2:			
Normal		Ex3:			
Sample #	Bar Code	Sample ID	SCC		
1	1		380		
2	1		369		
3	1		385		
4	1		392		
5	1		388		
6	1		383		
7	1		380		
8	1		384		
10	1		366		
11	1		390		
12	1		379		
13	1		395		
14	1		385		
15	1		383		
16	1		388		
17	1		400		
18	1		385		
19	1		388		
20	1		393		
Avg:			387.50		
STD:			8.7524		

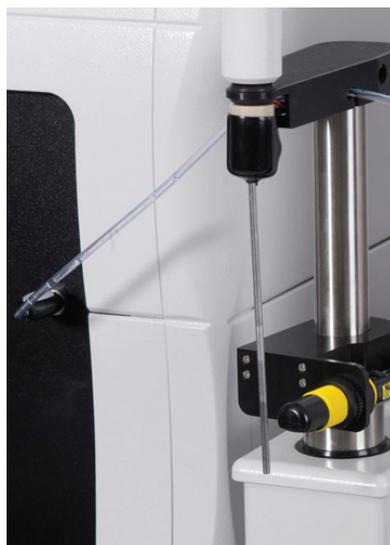
WORLDWIDE EQUIVALENCE OF ANALYTICAL RESULTS

The SomaCount™ FC is highly standardized through its ISO 9001 manufacturing process and with the use of the Bentley lyophilized SCC standards. These samples can be quickly reconstituted and used to standardize, calibrate or perform routine quality control to insure the instrument is always in its optimal operating condition.



BENTLEY DAIRYSPEC FT COMBINATION SYSTEM

The DairySpec Combi incorporates the latest technology in automated milk component analysis and somatic cell counting.



Automated sampling system for labs with high sample throughput requirements



Optional instrument cart allows for easy access and mobility

The DairySpec Combination system is formed by connecting the DairySpec FT with a SomaCount™ FC resulting in simultaneous results for milk component analysis and somatic cell counting. This automated system has been engineered for dairy laboratories and processing facilities of all types, including payment and Dairy Herd Improvement (DHI), that require highly reliable and accurate instrumentation. Ranging in speeds up to 300 samples per hour, this system provides efficiency, faster analysis and flexibility to increase testing speed as sample volume increases. The DairySpec Combi is pre-calibrated to offer standard results such as fat, protein, lactose, solids, SNF, MUN, FPD, SCC plus many other optional components. With the powerful FT Spectrometer and the open spectral format, future component development may be limitless. Please contact us for more information on these models.

SOMACOUNT™ FC TECHNICAL SPECIFICATIONS

Sample Temperature	4°–42°C
Start Up/Shut Down	Less than 10 minutes
Measurement Range	0 - 10,000,000 cells
Milk Type	Cow, goat, sheep, buffalo, camel, raw
Accuracy* (Cv)	Cv < 10% (against DMSCC)
Repeatability* (Cv)	SCC at 500,000 ≤ 3%
	SCC at 300,000 ≤ 4%
	SCC at 100,000 ≤ 6%
Carry-Over	< 1.0%, typically below 0.5%
Sample Condition	Fresh or preserved
Speed	Optional: up to 300 samples/hr
Electrical	110/220V; 50/60Hz
Dimensions (DxWxH)	24" x 26" x 15.5" (61 x 66 x 39.4 cm)
Weight	100 lbs. (45.4 kg)

* Specifications subject to change without any prior notice.



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