FOSS - your global partner in profitable dairying
For several decades FOSS has been partner for dairies and milk testing laboratories around the world. Our common goal has been to optimise the dairy business by focusing on process control and quality assurance at all stages along the “Milky Way”.

Today we offer a complete range of solutions that determine the hygienic quality and chemical composition of milk and dairy products:

- Fully-automatic solutions for herd improvement and milk payment
- User-friendly, rapid analysers for at-line or laboratory analysis of raw materials, intermediates and finished products
- On-line solutions for real-time process control
- Approved primary methods for validation of product composition
- Rapid and safe pathogenic testing

In this brochure we are proud to present our broad range of solutions for chain management from cow to consumer. Our wide product range has put FOSS firmly in the position as the market leader in milk and dairy product analysis - a position we aim to maintain through substantial investments in customer support as well as research and development. Our aim is to continue satisfying our customers' needs - now and in the future.

Peter Foss
President of FOSS A/S
- for chain management from cow to consumer

Raw material quality and profitability
Profitability of dairy production and end product quality is closely related to the hygienic and chemical properties of incoming raw materials. For instance, high somatic cell contents may reduce cheese yield considerably, while a high bacterial load can lead to short shelf life, off-flavours and many other problems in the products produced.

Furthermore, consumers nowadays tend to favour healthy dairy products such as cheese, and products with low fat contents, while butter consumption decreases every year. Such changes in consumption make it increasingly important for the dairy manufacturer to obtain raw milk that reflects changing market trends.

Farm management tools required
In order for dairy farmers to accommodate for the requested improvements in raw milk supply, proper information on the performance of each individual cow is necessary. Such information can be obtained through membership of a Dairy Herd Improvement Association, which records yield and analyses the milk from each cow, typically eleven times per year. The data obtained in this way on milk yield, composition and somatic cell count can be used for:

- Feeding optimisation
- Culling and breeding decisions
- Early detection of sub-clinical mastitis

Process control – the key to success
Once optimal raw materials have been ensured, the rest is up to the dairy plant. Quality consistency and profitability in production are both closely related to the ability to exercise tight process control.

Payment schemes improve quality
Implementation of milk payment schemes has proven very successful in this respect. By favouring milk producers who supply milk with high protein contents and low bacteria and somatic cell counts - and by penalising for undesired presence of for instance free fatty acids, added water and antibiotics, a dairy plant may gradually improve the quality of its incoming raw material.
The main constituents of milk, i.e. Fat, Protein, Lactose and Solids have been part of payments schemes for many years, just as these parameters are recorded in most Dairy Herd Improvement Systems. Modern measuring technologies have recently expanded the number of useful parameters, and this can further improve the value of milk payment analysis and/or herd recording.

**Savings on screening for Added Water**
Extraneous water should be avoided for legal, hygienic, aesthetic and economic reasons, and is therefore a penalty factor in most payment schemes. Earlier, Added Water was solely detected by cryoscopy measurement of freezing point depression in a number of randomly selected samples. With the modern MilkoScans from FOSS it is possible to screen all samples as an integral part of the ordinary analysis procedure, without any loss of analytical capacity.

In this way suspect samples are easily identified for possible subsequent verification by means of cryoscopy. Such a screening practice offers substantial savings – up to 90% - compared to the traditional method.

**Free Fatty Acids as indication of abuse**
A high content of Free Fatty Acids (FFA) in raw milk deliveries can cause quality problems in dairy production, such as rancidity in butter. FFA is consequently a penalty parameter in some countries. High FFA levels can be caused by defective milking installations on the dairy farm – especially automated milking systems may cause problems. By offering frequent FFA results as a part of the payment analyses, farmers are alerted when problems arise, and can immediately implement corrective actions to avoid future downgrading.

**Urea results for feeding optimisation**
Feed costs often exceed 50% of the total cost of raw milk production, and to stay competitive, dairy farmers must optimise through feed management schemes.

Routine analysis of Urea is an important tool in this respect. Combined with corresponding analysis data on Protein and Fat contents in the milk, it allows for:
- Optimisation of the protein-energy ratio in fodder rations, with reduced cost and higher yield as a result
- Improved general health and fertility of cows

The environment also benefits when cows are given a better balanced diet, as this reduces the pollution from their nitrogen discharge.

**Breeding and feeding for more Casein**
Casein is the most valuable milk constituent, especially for cheese and yoghurt producers. By implementing Casein as a payment parameter, cheese manufacturers may first of all obtain a stronger correlation between their costs of raw materials and output in terms of finished cheese, and ultimately produce a larger amount of cheese.

If cheese milk was paid according to Casein contents, farmers would inevitably request Casein analyses on single cows samples as well, as it would become profitable to breed and feed for the highest possible concentration of Casein.
- in milk payment schemes and herd recording

**MilkoScan FT 6000 for advanced analysis of composition**

The MilkoScan FT 6000 series of instruments are high capacity, fully automatic; IDF and AOAC approved FTIR (Fourier Transform InfraRed) spectrophotometers. The FTIR technology provides potential for analysis of virtually any parameter in milk.

The MilkoScan FT 6000 currently analyses the following parameters with unprecedented accuracy: Fat, Protein (Crude and True), Casein, Lactose, Solids-non-Fat, Total Solids, Urea*, Free Fatty Acids, Freezing Point Depression*, Citric Acid, pH and Homogeniser Efficiency*. Measuring capacity is 200, 300, 400 or 500 samples per hour, subject to choice of model.

The MilkoScan FT 6000 is a true member of the Integrated Milk Testing™ (IMT) family, which means that it shares the same software interface, data and sample handling as the Fossomatic 5000 and BactoScan FC. It can be combined and integrated with the Fossomatic 5000 somatic cell counter to form a CombiFoss 6000.

**MilkoScan 4000 for analysis of composition**

The MilkoScan 4000 series of instruments are high capacity, fully automatic; IDF and AOAC approved filter-based, infrared spectrophotometers. The MilkoScan 4000 analyses the following parameters: Fat, Protein, Lactose, Solids-non-Fat, Total Solids, Urea*, Citric Acid and Freezing Point Depression*. Measuring capacity is 200, 300, 400 or 500 samples per hour, subject to choice of model.

The MilkoScan 4000 is a true member of the Integrated Milk Testing™ (IMT) family, which means that it shares the same software interface, data and sample handling as the Fossomatic 5000 and BactoScan FC. It can be combined and integrated with the Fossomatic 5000 somatic cell counter to form a CombiFoss 5000.

**Integrated Milk Testing™**

Fair trade of milk and herd improvement based on quality parameters requires accurate, reliable and approved results. The IMT product range is dedicated to provide just that.

All IMT analysers share a common user interface for easy operation and maximum data safety. The IMT software provides for automatic sample identification, automatic performance checks, registration of QA data and procedures for automatic re-testing.

The common user interface makes operator training much easier and work planning more flexible. Furthermore, the MilkoScan and Fossomatic instruments can be combined into a CombiFoss solution that greatly reduces manual sample handling and integrates results. The common IMT conveyor eliminates the need for sample rearranging between CombiFoss and BactoScan analysis.

**MilkoScan FT 120 for analysis of composition**

MilkoScan FT 120 (see the following pages) is available in an automatic version dedicated for raw milk analysis, measuring the following parameters: Fat, Protein, Casein, Lactose, Solids-non-Fat, Total Solids, Density, Acidity, Urea, Citric Acid and Freezing Point Depression. Measuring capacity is 120 samples per hour.

An up-grade kit is available for automation of manual versions of MilkoScan FT 120.

* Urea, H-index and Freezing Point Depression analysis is protected by FOSS patents
Early detection of hygiene breach
Milk with high bacterial load is a very undesirable raw material for dairy production. Although pasteurisation kills the majority of bacteria, their metabolites may cause off-flavours, and enzymes continue their activities resulting in product defects and reduction of shelf life. Most milk payment schemes therefore grade milk according to the level of bacteria.

Traditional plate count methods require minimum 2-3 days of incubation before a result can be reported back to the farmer. This means that severe hygienic problems may go undetected for days, making troubleshooting more difficult and production losses larger than necessary.

By implementing the approved and rapid BactoScan method, farmers may be advised about possible hygiene breaches the same day as the sample was drawn from his farm tank. Such rapid feedback enables the farmer to search and correct for leaks, insufficient cleaning or cooling in the milking system, or health problems in the herd. In this way many hygiene problems may be solved even before the next load of milk is collected.

A BactoScan placed at dairy production facilities may also be used to monitor incoming raw milk from tankers. This in order to reject highly contaminated loads or divert to less susceptible production lines.

Apart from providing much faster result than any other microbial techniques, the BactoScan method, being fully automatic, also offers great labour savings. This operator independent method offers far better repeatability and reproducibility than any of the classical manual methods, thereby ensuring a fair milk payment.

Detection of sub-clinical mastitis reduces losses
Mastitis is the most costly disease in dairy farming. Veterinarian costs, antibiotics, milk retention, decreased yield, reduced payment and culling are estimated at 250-300 US Dollars in average loss per incidence.

Clinical mastitis gives abnormal milk and swelling of the udder. Sub-clinical mastitis, on the other hand, causes no visible changes and is therefore much harder to detect. But the loss in yield is already considerable at the sub-clinical stage. There are typically 15-40 cows in a herd with sub-clinical mastitis for every cow with visible clinical symptoms, meaning that the potential loss from undetected infections is huge.

The best way to detect sub-clinical mastitis is to follow the somatic cells count on samples from each individual cow from month to month, as it is being done by Dairy Herd Improvement Associations.

Better dairy product quality, shelf life and profit
From a dairy point of view, the interest in grading milk payment according to somatic cell content is evident:

- The contents of Protein (especially Casein), Fat and Lactose decrease, resulting in for instance lower cheese yield
- Lipase activity and Free Fatty Acid contents increase, which results in rancidity of final products and reductions in shelf-life
- Milk fermentation is adversely affected due to elevated levels of immunoglobulins
- The amount of sodium and chloride increase, causing an undesirable, salty taste
BactoScan FC for automated total bacteria count

In only 10 minutes the BactoScan FC provides fully automated determination of the hygienic quality of raw milk. BactoScan FC counts the total number of individual bacteria, based on flow-cytometry. In contrast to this, a standard plate count takes three days. Such rapid analysis can assist the farmer in an early detection of any breach in his milking hygiene.

The BactoScan method has become the industrial standard for counting bacteria in many countries all over the world. In EU more than 90% of all milk supplies are paid based on BactoScan results.

Measuring capacity is 50, 100 or 150 samples per hour, subject to choice of model. Two different levels of sensitivity are offered to allow for high quality results on all milk qualities. Only one active ingredient must be mixed prior to introduction of reagents to the instrument, which brings the total start-up time down to 15 minutes. Shut-down procedures last less than 5 minutes. A bacterial control sample assures and documents correct instrument performance and ensures instrument standardisation worldwide.

Samples may be analysed without pre-heating, which all in all makes it possible for one operator to handle up to 3 full-capacity BactoScan lines. The BactoScan FC is a true member of the Integrated Milk Testing™ (IMT) family, which means that it shares the same software interface and sample handling as the MilkoScan 4000, FT 6000 and Fossomatic 5000.

Fossomatic 5000 for automated somatic cell counting

Fossomatic 5000 is a series of fully automated, flow-cytometry based, IDF and IMS approved, somatic cell counters with unique reagent concept and waste handling. Pre-mixed dye is supplied in disposable bags and handled in a closed system within the analyser in order to protect the operator. Dye consumption is reduced and waste is separated into three fractions to protect the environment and to reduce cost of waste handling.

A special feature, the dynamic precision set-up, refines precision in specific areas, typically around grading limits and in the low count range. The unique Fossomatic Adjustment Sample concept provides for automated test of instrument performance and graphical presentation of results. Measuring capacity is 200, 300, 400 or 500 samples per hour, subject to choice of model.

The Fossomatic 5000 is a true member of the Integrated Milk Testing™ (IMT) family, which means that it shares the same software interface, data and sample handling as the MilkoScan 4000, FT 6000 and BactoScan FC. It can be combined and integrated with the MilkoScan 4000 to form a CombiFoss 5000 and with MilkoScan FT 6000 to form a CombiFoss 6000.

The Fossomatic 5000 is also offered in a basic configuration, Fossomatic 5000 basic, with a basic conveyor (5000 basic), traditional reagent preparation and without waste separation.
The task of the dairy is to transform the available raw materials into a maximum amount of higher valued end products.

Profitability depends directly on limiting excessive use of expensive components on the way. Furthermore, profit is closely related to the use of extra resources, such as added ingredients, energy and manpower, in the process.

**Information is essential**

It is therefore essential to have detailed compositional data at all stages in the dairy production. From the arrival at the platform, over the intermediate products in the manufacturing process, to the final contents in the finished dairy products, tight specifications and uniform quality can only be achieved through timely and reliable data.

Given this information, production planning, standardisation and mass balance control may be optimised. The profitability of a plant can thereby be improved considerably.

**Profitable and reliable dairy processing**

In the dairy plant, the frequency of analyses made, and the accuracy of the methods used, determine how close a production may be driven to target, hence profitability.

Use of reliable methods for verification of end product specifications further reduce the risks, avoiding noncompliance with legal limits, customer complaints and – who knows – maybe costly product recalls from the market.

FOSS offers a number of rapid, user-friendly analysers that can be applied on the platform or at-line in the production. For use in the lab we supply analysis of composition in raw materials and intermediate as well as finished products.
- and for verification of end-product quality

**MilkoScan S 50 for milk and cream**

MilkoScan S 50 series determine the contents of Fat, Protein, Lactose and Solids in milk, cream and other liquid dairy products. 2 - 4 parameters may be determined simultaneously, subject to instrument configuration.

Results are based on the IDF and AOAC approved mid-infrared measuring principle. Analytical capacity is 50 samples per hour.

The instrument requires practically no operator training. Samples are measured cold; results are displayed and printed on the integrated printer in a matter of minutes. Subsequent cleaning and zero setting are done automatically assuring that the instrument is permanently ready for analysis.

This makes the MilkoScan S 50 particularly useful at milk reception and for at-line use in production during standardisation of milk and cream.

**MilkoScan FT 120 for complex analysis**

The MilkoScan FT 120 employs the FTIR measuring principle, approved by IDF and AOAC. A complete analysis of product composition with up to 12 parameters can be presented in as little as 30 seconds.

The basic configuration offers determination of Fat, Protein, Lactose, Total Solids and Solids-non-Fat in milk, cream, whey, yoghurts and other simple dairy products. Via the Application Module components such as Specific Sugars, Casein, Free Fatty Acids, Lactic Acid, Citric Acid, Salt, Urea, Density, Total Acidity and Freezing Point Depression may also be analysed.

All MilkoScan FT 120 instruments are standardised, and FOSS provides transferable, ready-to-use calibrations for a wide range of dairy products. Special modules, furthermore, allow users to develop their own calibrations, whereas the QA module provides for pattern recognition and detection of non-compliant samples.

The MilkoScan FT 120 is exceptionally user-friendly: All operation takes place from one single screen picture, samples are measured without pre-heating, and data storage takes place automatically. Totally carefree operation is achieved by implementing optional automatic cleaning and zero setting facilities.

These features make the MilkoScan FT 120 equally suitable for at-line control of various dairy processes and for sophisticated analyses in the lab.
The necessary tools for standardisation
The ability to standardise and thereby optimise production strongly depends on the analytical tools available
- The faster the results are available, the sooner the process can be adjusted
- The more accurate the results are, the closer adjustments to target values can be made
- The more frequent the results come, the better adjustments for sudden variations in composition may be made

Traditional wet chemistry methods are, generally speaking, either
- Very precise, but slow, labour-intensive and costly
- Rapid, but imprecise and operator dependent

If these methods are used, opportunities for optimising the production processes are very limited.

With a rapid, accurate and operator-independent analyser placed at-line, production staff can not only obtain much faster and more reliable results, but due to the speed, ease and low cost of analysis, they may also increase the frequency by which they check and adjust the process.

On-line process control
The tightest specifications and optimal profitability are obviously obtained by controlling the process directly through on-line analysis.

An on-line instrument will serve as a tool to reduce the variation between production batches even further; and once the variation is narrowed, the target value may be brought closer to the limit, thereby improving profitability and product consistency.

FOSS provides a complete on-line solution for real-time milk standardisation.
ProcesScan FT for milk standardisation

ProcesScan FT is a concept specifically designed for implementation on the process floor for accurate on-line measuring of milk and other liquid products.

The concept is constructed with an absolute minimum of delay time and milk waste in mind. No operator intervention is required, as all sensor processes are automated and surveyed by self-diagnostic software.

ProcesScan FT uses the FTIR-principle and offers robust and transferable calibrations for Fat, Protein, Lactose and Solids, with an almost unlimited potential for new parameters and unsurpassed performance.

The design of ProcesScan FT enables stable operation even in harsh environments with vibrations and temperature fluctuation.

As measurements take place under high pressure, the performance of ProcesScan FT is practically insensitive to varying amounts of air in the process stream.

A diamond window cuvette allows the sensor to be included in the CIP routines.

ProcesScan FT is also equipped with a pipette for manual entry of samples during on-line operation.

The user interface is a PC-based Windows application, but basic information is also available directly from a built-in screen mounted in the stainless steel cabinet.

Results can be transferred instantly to a regulation controller for optimal standardisation.

ProcessTouch for optimal regulation control

ProcessTouch is a PC-based software program that links FOSS on-line sensors to the dairy process.

Based on accurate real-time measuring results, ProcessTouch forms a unique platform for on-line regulation and process optimisation in the dairy.

The overall design is flexible and easy to implement with drivers for all major PLC solutions. The system comprises a range of modules such as:

- Simple data management
- A flow administration program that keeps track of volumes and composition in pipes and product tanks at any time
- Regulation control of product components for standardisation. The system can be configured for simple set-point standardisation or more accurate tank standardisation

ProcessTouch combined with ProcesScan FT provides milk standardisation with an accuracy that is second-to-none. Regardless of whether the application is drinking milk or milk for cheese, powder or condensed milk production, the tight process control of this FOSS instrument/software combination offers improved product consistency and greatly improved production profitability.

ProcessTouch can also be combined with Process Analytics (see next pages) for on-line regulation control of for instance Moisture in continuous butter churns or quark separators.
There are a number of critical control points further down the process lines, where instant results are also required for optimal profitability.

**Controlling butter churns**
Rapid and reliable information about the Moisture, Fat, Salt and Solids-non-Fat contents in butter during the churning process enables the butter maker to fine-tune the constituents and thereby get closer to target values. For continuous butter churns, the tightest control is obtained by implementing a real-time in-line sensor at the exit of the churn.

**Moisture control in milk powders**
Instant moisture results are required for controlling flow rates and temperatures of spray dryers and fluid beds, enabling fine adjustment of powders to match specifications precisely. FOSS offers solutions for at-line as well as in-line application.

**Optimising cheese production**

**Hard cheese**
The closer a cheese maker can follow product composition during the production, the faster he can make corrective actions on subsequent batches. A rapid at-line analyser can substantially enhance the profitability of any cheese production.

**Fresh cheese**
In cream cheese or quark production, controlling the efficiency of the separator can optimise the moisture contents of the final product. Installation of in-line sensors directly on the separator lines will provide ultimate control and the highest yield. Alternatively, an at-line analyser can serve several process lines.

**Processed cheese**
Knowledge about the composition of blends is a pre-requisite when producing processed cheese. A rapid at-line analyser serves this purpose, but as pre-blends tend to be very inhomogeneous, installation of probes directly at various stages of the process flow will provide quick feedback for recipe optimisation.
**FoodScan for butter and cheese**

The FoodScan offers rapid analysis of a wide variety of solid and semi-solid dairy products with minimum sample preparation. Based on a monochromator that scans the very Near Infrared Transmission (vNIT) region, accurate determination of Moisture, Fat, Protein, Solids and Lactose is achieved within one minute. Robust design and easy operation combined with stable and wide-ranging ANN or PLS calibrations make the FoodScan ideal for at-line process control.

The performance of FoodScan has proven to justify the investment in numerous dairy plants. For example the measuring accuracy for Moisture in butter is well below 0.1 %, just as Moisture in cheese can be measured with accuracies below 0.2 %.

The FoodScan comes in two different versions. FoodScan Pro is designed for the production environment with an IP65-proof cabinet and touch screen operation from an embedded PC. FoodScan Lab is designed for use in the laboratory and is operated from an external PC.

Especially the FoodScan Pro is ideal for at-line process control of butter, cheese, quark, processed cheese, cream cheese, yoghurt and similar products. FOSS offers ready-to-use calibrations which greatly reduces the time and cost of getting started.

**Routine/Direct Contact Analyser for milk powders**

For the milk powder producer, the Routine Dairy Analyser provides accurate and efficient at-line analysis of Moisture, Fat, Protein, Lactose, Ash and pH in powder.

The powder sample is simply loaded into a sample cup without further preparation and placed in a spinning sample module. Another configuration, the Direct Contact Food Analyser, where a static sample is placed directly on top of the detector is also applicable for milk powder as well as for concentrates.

The measuring principle is based on Near Infrared Reflection (NIR) technology and results come within one minute.

As measurements are based on the full near-infrared spectrum, results are very robust and insensitive to variations in particle size, crystallinity as well as sample temperature.

FOSS offers a large database of calibrations for various milk powders, reducing the start-up time of new installations.

For dairies or institutes with additional analytical demands, a more widely applicable version of the instrument exists: the Versatile Dairy Analyser. This instrument provides analysis of a large variety of low moisture products such as powders, cheese, butter, quark, etc.

**Process Analytics for in-line process control**

Process Analytics for in-line measurement of dairy products is designed for direct installation in a manufacturing plant. The analyser concept combines a high-energy, full-scanning NIR monochromator with high-quality fibre optics and probes.

The system is interfaced to the process line via probes using only food grade approved materials. These probes can resist high temperatures and pressure as well as CIP routines.

Process Analytics measures Moisture, Fat, Protein, Solids and other constituents in viscous products, such as cream cheese, quark, butter, condensed milk, Mozzarella and processed cheese, as well as Moisture, Fat and Protein in milk powders. Rugged design and completely unattended operation makes Process Analytics the perfect solution for in-line process control.
- for validation and certified reference results

Compliance with specifications
Certified methods are often required for validation of compliance with certain end-product criteria. Furthermore, all indirect measuring methods require reference data for calibration purposes. Such data must be based upon approved methods to ensure accuracy and stability in the subsequent predictions. The officially approved solutions from FOSS are designed to ensure fast analysis with a minimum use of chemicals, some of which are recycled. Many of the procedures are automated, and the traditional drawbacks of wet chemistry are therefore greatly eliminated.

Soxtec Avanti 2050 for fat determination
The Soxtec Avanti is the latest generation of automated Soxhlet extraction systems for determination of Fat in dairy products. With the solvent recovery system, fat extraction is possible within a couple of hours.

Accuracy and safety are the hallmarks of the Soxtec Avanti, and AOAC recommends the Soxtec as one of the best extraction techniques. The Soxtec Avanti features:
• Official AOAC approval
• User programming for application flexibility
• Closed solvent addition to limit solvent exposure
• Solvent recovery
• Built-in safety systems for over-temperature protection

Kjeltec 2300 for protein determination
The Kjeltec 2300 is the ultimate solution for Kjeldahl nitrogen analysis - used for protein determination in dairy products. It sets new standards for the safety as well as for the low costs of running, and protein determination is as safe and accurate as never before. The Kjeltec offers:
• A calorimetric titration system officially approved by AOAC, EPA, DIN, and ISO
• PC-controlled data downloading
• Pre-programming for 10 distillation routines
• Pro-active safety systems to protect against handling errors
Meeting consumer demands
Pathogens like Listeria, Salmonella, Campylobacter and E. coli O157 can enter products at any point in the food production chain, reducing the value of the food and adding to production costs. But consumers simply will not accept that otherwise agreeable foods constitute a risk to their health.

Modern dairy plants must therefore run HACCP schemes as part of daily routines. Critical areas in the process must be carefully monitored to stop sources of contamination before they spread - and to prevent favourable living conditions for dangerous microorganisms.

Early product release saves costs
Traditional methods for microbiological testing applied in-house or as an outside service are slow and labour intensive, and not very suitable for early release of products. The long response time presents a problem to plant managers, who want to deliver fresh, high-quality products while they are still of high value.

It can be very costly to wait up to seven days for results from a traditional test. Therefore FOSS offers solutions that will allow rapid testing and safe food production.

EiaFoss for rapid pathogenic testing
The EiaFoss enables early release of products directly to customers instead of costly storage. Time and money are saved in the HACCP scheme by testing for pathogens in 24 or 48 hours, depending on the analyte. This provides savings in storage and refrigeration costs.

The EiaFoss is unique in many ways:
• Automation provides reliable operator-independent results
• Endorsed by many recognised institutes and government bodies all over the world
• User friendliness is second-to-none
• Dedicated protocols help optimise testing
• Test for Salmonella, Listeria, E. Coli O157 or Campylobacter, with up to 27 samples in a single run

MicroFoss for rapid bacterial enumeration
The new MicroFoss system is a modular, PC-controlled analysis system for the detection and enumeration of a wide range of microorganisms in food. The MicroFoss concept is based on traditional microbiology, employing microorganism growth and dye indication. MicroFoss uses ready-to-use vials, specific to each analyte. The MicroFoss system measures TVC (Total Viable Count), Coliforms, E. coli bacteria, Enterobacteriaceae, and Yeasts, in both raw materials and finished products. With screening times as low as seven hours, the MicroFoss system requires less labour inputs than any other products in the market today, thus allowing food companies to improve their surveillance programs without additional staff.

The MicroFoss System offers a 32-vial unit and a 128-vial unit with 4 incubators. The system allows any combination of up to four 32/128-unit modules to be controlled by a single PC, offering up to 512 tests per run.
FOSS - dedicated analytical solutions

We are where you are

FOSS provides and supports dedicated, rapid and accurate analytical solutions, which analyse and control the quality and production of food, agricultural, pharmaceutical and chemical products to the enhancement of our customers’ business.

We are your partner when you want excellence in analysis. We produce and support dedicated, accurate and reliable solutions based on different techniques.

Our solutions are sold through FOSS sales and service companies in 21 countries. In the rest of the world our solutions are marketed and serviced by more than 75 well-qualified distributors.

All our solutions are characterised by:

• Instruments developed as dedicated solutions to cover the needs of specific customer groups
• Instant results that enable production personnel to take corrective actions immediately
• Accurate results that reduce safety margins and thereby increase profitability
• Automation that makes them easier to operate and generally less labour intensive – this again saves costs
• The fact that they are highly recognised, widely used and officially approved by authorities

We are where you are, and at your service.

We have manufacturing, research and development facilities in Denmark, Sweden and the USA.

Our local support engineers are trained to provide the best possible assistance, and our in-house scientists are constantly expanding the application range of our instruments. All this to ensure you the maximum benefit from using our solutions.

Your investment is safe with FOSS.

Dedicated Analytical Solutions

FOSS Electric A/S
69, Slangerupgade
DK-3400 Hilleroed, Denmark

Comp. Reg. Number: 7339 9815

Tel: +45 7010 3370
Fax: +45 7010 3371
E-mail: info@foss-electric.dk

www.foss.dk