

Chemical analysis – traditions essential for your future



When Robert Boyle first used coloured plant extracts and pH reagents in the 17th century, he quietly began a revolution in chemistry that continues to take us into a hopeful future. Every advance with more efficient and precise analysis relies on basic chemical processes. Progress is always built on a solid tradition of research and development. Even modern techniques like infrared and other spectroscopic applications are dependent on calibrations based on chemical analysis.

FOSS' reliable and dedicated analytical instruments using fundamental principles of chemistry have been, and continue to be, essential for safe and economical food and feed production. FOSS has an outstanding record of investment in technology development for the future, and for making routine chemical analysis simple. This is why the FOSS Group remains at the forefront of applications using chemical analysis.

A company to grow with

It is of great importance to us that our customers are satisfied with the cost/benefit of doing business with us. We always aim at solving our customers' analytical needs and problems in our continuous strive for total quality. FOSS specializes in accurate, safe and reliable instruments using patented techniques. We are the only supplier to offer a complete range of high-speed systems with indirect and reference methods. Our instruments have applications throughout the production chain, from on-line process quality control to routine analysis in the reference laboratory. Our products are developed in close cooperation with key customers and recognised research institutes – and through technological partnerships.

Doing business with FOSS means entering into a true partnership network at an international level.

Sample Preparation Mills

Sample preparation is a crucial part of the all chemical analysis. Poorly prepared samples result in large analytical errors. Select a Foss Tecator sample mill to suit your needs:

- Cemotec™ to avoid loss of moisture
- Cyclotec™ to achieve a small and uniform particle size
- Knifetec™ for high fat/high moisture samples
- Homogenizers for large samples

Flow Injection Analyzers

FIAstar™ systems are used for the analysis of nutrients and other parameters in water and soil, as well as meat, dairy and other foodstuffs.

- FIAstar systems pay for themselves within a few months through significant operational savings
- The 'Plug & Analyze' concept ensures simple installation with smooth and easy operation.
- Fast start up and shut down (< 10 min)
- Fast change of methods using pre-configured method cassettes
- Up to three parameters can be analyzed simultaneously
- Multiple parameters are analyzed sequentially using "Plug & Analyze" method cassettes
- Digital matrix detector minimises refractive index effects and enables low detection limits
- Immediate results (< 60 sec) allow cost-effective automation, even with small series of samples

Soxtec™ Extraction Systems

Solvent extraction has a vast range of applications across almost every field of industry. Soxtec™ is the safe, accurate and economical solvent extraction solution.

Soxtec systems provide fully automated unattended operation – the fastest on the market, using less solvent and water. Savings can range from US \$1500 to US \$8000 per annum in solvent costs alone.

With Soxtec systems the entire extraction takes place in a closed, secure system.

- AOAC & EPA approved methods
- At least five times faster than Soxhlet
- Fully automated, unattended operation for precise results, operator safety and convenience
- Reduces solvent usage by up to 80% with automated recovery: typically ~16 ml solvent per extraction
- Batch handling tools avoid handling of thimbles or hot extraction cups
- Safe, closed loop, solvent-addition kit reduces exposure to solvents
- Unattended, overnight operation increases throughput
- Combines with SoxCap™ Hydrolysis system for total fat analysis according to official procedures.

The FOSS range of chemical analysis systems



Kjeltec™ Systems

The Kjeldahl method is the most versatile technique available for nitrogen analysis, being the only method that can be adapted to any sample matrix or form of Nitrogen. The Kjeltec™ series from FOSS is designed to attain the highest accuracy and precision at all concentrations, whilst setting new safety standards in Kjeldahl analysis. They offer unsurpassed value for money. You may save US \$2 000 - US \$6 000 per year in reagent costs alone. If you are doing more than 30 tests per day, further savings are achieved using our fully automated sampler system.

- Over 30 000 users worldwide
- AOAC, ISO approved colorimetric titration system
- Complies with the global standard EN ISO 5983-2
- Automated distillation, titration and result presentation in ~4 minutes
- Accurate analysis independent of operator
- Unique patented SAFE distillation procedure
- Corrosion resistant construction reduces maintenance costs
- Interface to PC/LIMS, balance and printer

Tecator™ Digestion Systems

Digestion systems are used for acid digestion prior to Kjeldahl, trace metal, total phosphorus and other analyses. The modular design provides economical basic units and fully automatic systems for safe, accurate, unattended operation.

- Higher overall performance
- GLP & Traceability support through PC communication
- RS232 and Bluetooth interface
- Application Notes - downloaded from CD database
- Integrated automation with user interface adapting to actual product configuration
- More efficient fume removal and containment, with lower acid loss
- Fully protected electronics

Fibertec™ Systems

The Fibertec™ systems are specifically designed to determine crude, acid detergent (ADF), neutral detergent (NDF) fibre and lignin according to relevant ISO, EC and AOAC standards. Fibertec E, is specifically designed for analysis of dietary fibre following approved enzymatic procedures.

- ISO, EC and AOAC approved methods
- No sample transfer during analysis reduces analytical errors and saves time
- Efficient filtration through combined action of vacuum and pressure
- Batch handling tools for accuracy, convenience and safe operation
- Separate cold extraction unit for safe and simple de-fatting of samples with fat content >1%
- Manual and semi-automatic systems
- Manual FiberCap™ system for high performance at low cost

Made for a perfect fit

FOSS produces a wide range of analytical systems – each tailor-made for specific customer needs. Our strength and the key to our continued success, is an ability to produce instruments that exactly match your current and future needs.

Today's busy laboratory is characterized by ever-changing demands and workloads. But routine analysis is still the main laboratory task – though a variety of methods and types of analysis may be used.

No matter how advanced an instrument, the instrument alone is not enough to improve your analytical performance. We specialize in making routine analysis simple with high-performance instrumentation. Specially designed tools for batch handling make laboratory work safe, accurate and easy. Just as importantly, we provide a complete range of support services: from provision of helpful accessories, beneficial trade-in offers, staff training, to a wide range of application notes and our customer magazine "In Focus".

Local service contracts follow standardized protocols. If you prefer to do preventive maintenance yourself, special kits are available. Consumables including tubes, Kjeltabs, thimbles and crucibles are precisely produced to function as integral parts of our units.

Long-term partnership ensures optimal analysis

For many years our main objective has been to make routine analysis simple. We focus on assisting you to optimize your production and analytical processes. We believe FOSS products prove we meet our objectives. And we are confident that our quality standards ensure safe, reliable operations. We are always seeking to adapt to your requirements and aim to create a mutually beneficial long-term partnership. Thus we take special care to ensure a perfect match between your needs and FOSS products and services.

FOSS provides the total solution

Customer satisfaction is our goal. We help you improve your business and reduce your risks by focusing on profitability, safety, service, productivity, quality and environment. FOSS can be the catalyst that helps promote your business and improve your competitiveness. When you invest in a FOSS solution, your investment is secure, now and in the future. Return on investments from FOSS solutions are second to none. We constantly develop new instruments, new applications and new calibrations for our solutions. Our solutions will last,

and FOSS is here to stay. Our products are sold through joint sales companies in 21 countries. In the rest of the world, our products are marketed and serviced by some 75 well-qualified distributors. Our worldwide network of specialists and factory-trained and certified service engineers ensures fast supply of original spare parts, as well as consumables, technical know-how and application support. By focusing on quality, up-time and response time, we provide value for money.

The FOSS solution



Dedicated Analytical Solutions

FOSS Analytical
69, Slangstrupgade
DK-3400 Hilleroed
Denmark

Tel.: +45 7010 3370
Fax: +45 7010 3371

info@foss.dk
www.foss.dk

FOSS



Chemical Analysis Solutions
**Founded on principles,
prepared for progress**

