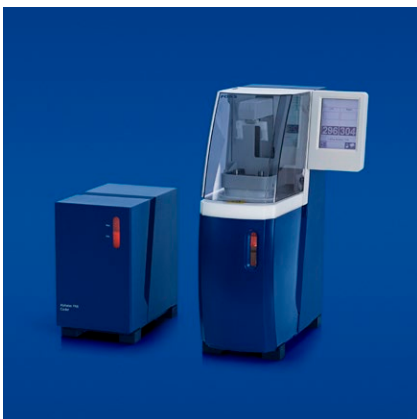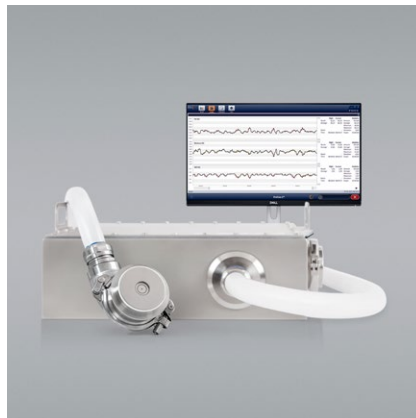# FOSS

GRAIN AND PROCESSED GRAIN SOLUTIONS

THE COMPLETE PRODUCT RANGE

ANALYTICS BEYOND MEASURE

PRODUCT RANGE

Infratec™ NOVA

Infratec™ NOVA is officially approved and established worldwide as the standard for determining protein, moisture, oil and starch. Unique ANN calibrations built on harvest data comprising over 50,000 samples, enable analysis of any type of sample with outstanding accuracy. Monitor and control instruments with networking tools and access remote diagnostics for rapid problem solving. Optional modules for flour analysis, test weight and sample transport module securing measurement of smaller sample volumes.

Sample types
Wheat, barley, maize, rice and other cereals, oilseeds, beans and pulses, flour and meals, green malt and more.

Parameters
Moisture, protein, oil, test weight, starch, wet gluten, fibre, ash and many more.

Infratec™

Solid, straightforward and reliable, Infratec™ draws on the latest advances in NIR technology, connectivity and usability. Comprehensive ANN calibrations coupled with the best repeatability and transferability in the industry. Advanced connectivity let's you keep an eye on instrument performance and operator SOP-compliance from anywhere. It makes the job of quality control easier and less time-consuming as a reliable corner-stone for any grain handling operation.

Sample types
Wheat, barley, maize and other cereals, oilseeds, beans and pulses, flour, meal and more.

Parameters
Moisture, protein, oil, test weight, starch, wet gluten, fibre, ash and many more.

ProFoss™ 2

ProFoss™ 2 is an in-line process analysis solution employing high-resolution technology for accurate monitoring of the production process. Advantages include improved yield and profit achieved through savings in raw materials and consistent product quality. It also leverages all the latest development of digital technologies to seamlessly interface with with Infratec™, NIRS™ DS3 or other benchtop instruments to deliver peak performance.

Sample types
Whole grain, flour, oilseed meal.

Parameters
Protein, moisture, oil, ash, fibre, depending on the application.

GAC® 2500-C

Use a simple, yet accurate solution for moisture tests. UGMA compliant impedance measurement at 149 MHz gives a representative moisture analysis of the whole kernel. A result for test weight is delivered simultaneously. Test hot or frozen grain within a wide temperature range from -20 to +45°C. It is fully-connected via the FossManager™ networking software that supports grain networks around the world.

Sample types
All types of grains, beans and pulses

Parameters
Moisture and test weight.
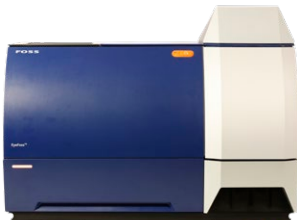
EyeFoss™

Image analysis instrument suitable for the objective visual quality assessment of whole grain. Assess your incoming grain quickly with greater consistency and with less strain on operations during the busy harvest season. It defects visual damages of a half liter of grain (avg. 10,000 kernels) in 3-3.5 minutes. Assess grain quality objectively and monitor your grain receival network from anywhere at any time. For grain receivers, central laboratories, grain market regulators, flour mills, maltsters etc.

Sample types
Wheat, barley, rye and durum.

Parameters
Visually assessed parameters of damaged grain and foreign material.

MycoFoss™

MycoFoss™ provides smarter management of mycotoxin risks. Make better de-cisions about when to safely accept incoming grains at your receival site or raw material at your production plant. MycoFoss requires no special skills - just place the sample cup with the grinded sample in the instrument and push start. The fully automated solution provides accurate results on up to 6 mycotoxins within a few minutes without the need of laborious procedures and hazardous materials.

Sample types
Maize, wheat and barley.

Assay solution
Singleplex Maize and Wheat: Aflatoxins - AFLA (AFB1, AFB2, AFG1 and AFG2), Deoxynivalenol - DON.
Singleplex Barley: Deoxynivalenol - DON.
Multiplex Maize and Wheat: Deoxynivalenol - DON, Zearalenone - ZEA, Afla-toxins - AFLA (AFB1, AFB2, AFG1 and AFG2) Ochratoxin A - OTA, Trichothecene 2 - T-2, Fumonisins - FUM (FB1, FB2 and FB3).

Alphatec™ FNº

Alphatec™ FNº, is a safe way for grain receivers and flour millers to perform the standard falling number test used in the industry to check sprouting damage in grain and enzyme-activity in grain and flour before baking, malting etc. Innovative safety features reduce the risk of burns and injuries. A cooling lid minimises the rush of steam when loading samples, an insulated sample bath prevents contact with hot surfaces, while an overflow directly into waste also stops hot water spillage.

Sample types
Grain and flour samples requiring falling number analysis in compliance with international standards.

Parameters
Falling number based on alpha-amylase and related enzyme activity in grain and flour.

Hammertec™

Hammertec™ is a hammer type mill specially designed for standard sample preparation for falling number analysis (Alphatec FNº), NIR, nitrogen combustion methods, and other reference analyses. Non-stick surfaces are used to prevent carry-over and ensure more accurate results. Noise insulation makes it quieter than existing solutions, while a smaller footprint makes it significantly lighter and easier to move.

Sample types
Designed for milling grain samples for falling number, wet gluten and reference analysis for protein, moisture etc.

Technology
Crushes samples into a fine and homogenous powder using high speed rotation of a hammer by which the sample is impacted.

Infratec™ Sofia

The fully portable Infratec™ Sofia whole grain analyser measures protein, moisture, oil and wet gluten in the field or at smaller receival sites. Calibrations are based on those of the Infratec grain analyser, officially approved and widely used for on the spot grain testing on-farm or at grain receiving stations.

Sample types
Wheat, barley, durum, maize, oilseeds, soybean and more.

Parameters
Moisture, protein, oil and wet gluten.

NIRS™ DS3

The NIRS™ DS3 analyser helps millers to boost yield by offering unsurpassed, rapid analysis of ash in addition to reliable flour analysis for protein and moisture. Ideal for routine testing of flour and grains in the laboratory or in the production environment. The NIRS DS3 has a wavelength range between 400-2500 nm.

Sample types
Wheat, rye, maize, flour, oilseeds and oilseed products. Direct measurement of flour and grain samples.

Parameters
Protein, moisture, ash, oil, wet gluten, water absorption, colour and more depending on application.

REFERENCE ANALYSIS

Kjeltec™ 9

The Kjeltec™ 9 Analyser provides fully automated Kjeldahl analysis adding advanced digital capabilities to an already brilliant technology. Take advantage of fast turnaround time, improved data handling and less risk of human error. Renowned accuracy combined with built-in colorimetric titration and an optional autosampler makes it perfect for the busy laboratory with a large sample volume and high variation.

Sample types
Raw materials and finished products in food, feed and agriculture.

Parameters
Nitrogen and protein.
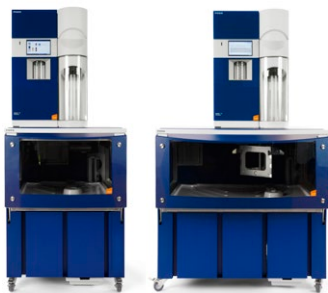
Kjeltec™ 9 Autosamplers

Combined with an optional 20 or 60 place AutoSampler, the Kjeltec 9 Analyser provides the benefits of automation for any laboratory. Increase your throughput, improve safety and free up staff to do other work. Just load your sample racks directly from the digestion block without touching any tubes and Kjeltec 9 will perform accurate analysis unattended for more than four hours.

Digestor 2508 and 2520 with Lift

The Digestor with lift system is based on a digestor and a tube rack with 8 or 20 tubes. The Digestor system facilitates fully automated procedures, eliminating heavy and risky handling of hot chemicals. Place a tube rack in the lift, select the application and press start. The Digestor then controls the entire process. Two-way PC communication supports traceability and GLP.

Digestor 2508 and 2520 with Racking system

The Digestor with racking system follows the same procedure as the Digestor with lift system. An exception to this is the combining/separating of the tube rack and exhaust manifold and movement into the cooling position which is performed manually when the signal is heard.

Sample types
Raw materials and finished products in food, feed, agriculture and related matrices. Water and wastewater and a wide range of industrial compounds.

Parameters
Kjeldahl digestion, chemical oxygen demand and other reflux chemistries, trace metal analysis by AAS or ICP instruments.

Dumatec™ 8000

The fully automated Dumatec™ 8000 is based on the combustion principle for nitrogen determination and improves laboratory efficiency and productivity. With reliable and rapid results in just 3-5 minutes and instant analysis of all resulting gases, it is the perfect choice for busy laboratories. The Dumatec ensures a high level of accuracy across a full range of calibrations as well as high uptime thanks to the rapid 30-minute start up time and the 117-position auto sampler enabling high unattended operator time. FossManager™ networking software allows you to remotely access your instrument fleet and manage results from anywhere, anytime, while ensuring standard operating procedures across laboratory sites, traceability and improved quality control.

Sample types
Raw materials and finished products, both in solid and liquid form, in food, feed and agriculture.

Parameters
Nitrogen/protein.

Soxtec™ 8000

The Soxtec™ 8000 extraction unit is a fully automated system with 6 positions. Two units can be combined to make a 12-place system for up to 84 samples per day, making it perfect for the busy laboratory. The unique solvent handling feature reduces the operator's exposure to solvents, ensuring a safe and efficient work environment. For total fat analysis, the Hydrocap™ filter is transferred from the hydrolysis unit to the extraction unit using batch handling tools to ensure fast and safe handling of samples and cups, while preventing contamination.

Sample types
All samples that are extractable in solvent: raw materials, intermediates and finished products in food, feed, soil, sludge, polymers, paper pulp, textiles and more.

Parameters
Crude, free fat and other extractables. Total fat (when used with Hydrotec™ 8000).

Fibertec™ 8000

This is a fully automatic system that uses internally preheated reagents added to a closed system to minimise contact with hot reagents. It determines fibre content according to Weende, van Soest and other recognised methods. Single or sequential extractions including boiling, rinsing and filtration are performed under reproducible and controlled conditions.

Sample types
Raw materials and finished products in feed and agriculture.

Parameters
Crude Fibre (CF), Neutral Detergent Fibre (NDF), amylase treated Neutral Detergent Fibre (aNDF), Acid Detergent Fibre (ADF), and Acid Detergent Lignin (ADL).

FOSS