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finder sd

Customized **NIR** solutions
for your business

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ANALYSIS IS SIMPLY EVERYTHING!

Quick quality inspections for every production stage

Analysis is everything. Regardless of whether it involves the analysis of meat, pasta or cheese. This is because every food processing company has to know the quality of their raw materials, identify the properties of its intermediate products and produce the final product according to customer specifications.

Samples are often taken and sent to a wet chemistry laboratory for analysis. This analysis can take up to 14 days with external laboratories. During this time, goods must be temporarily stored until they are released or processed with the risk that batches with deviating quality can reach the consumer in the meantime. This increases the risk of damaging the brand reputation, batch recalls or unforeseen storage costs.

The Finder SD near-infrared analysis system can be used to identify quality-determining parameters such as fat, protein, BEFFE, ash, water, etc., in food quickly, easily and reliably. It makes no difference whether the samples are incoming raw materials, semi-finished products or final products. The all-in-one analyser checks everything in real time, so that reliable results are available in just a few seconds. This ensures continuous and close monitoring of important product parameters in-house. But that is not all: For each measurement, the Finder SD generates a comprehensive analysis report with the obtained values, spectra and batch numbers. This allows for documentation of the raw-material quality as well as the final product.

During the annual food inspection audits, the complete documentation of the analysis report can be accessed quickly and easily.

What is near-infrared spectroscopy (NIRS)?

NIRS is non-destructive and reliable measurement method for analysing a wide range of samples with infra-red beam. It does not require additional chemicals or solvents, which makes it safe and environmentally friendly. Due to the deep penetration depth of the IR beam (5 mm) into the sample material, NIRS is relevant for many applications such as quality analysis, process control, and inspecting incoming or outgoing goods. The spectral range extends from 760 to 2500 nm.

Near-infrared radiation results in oscillation of the active bonds and functional groups in the materials. The wavelength of such oscillations can be measured in the form of absorption peaks in a spectrum. The recorded peaks are specific for the materials ingredients. Accordingly conclusions can be drawn about the sample's composition.

NIRS is ideal for determining important parameters in food: salt, fat, dry matter, density, carbohydrate content, sugar, alcohol, fibre… the list is endless!

Advantages of NIRS:

- **no or little need for sample preparation**

- **fast, can be automated, reproducible, simple, reliable**

- **non-contact and non-destructive testing**

- **qualitative or quantitative analyses possible**

- **measurements of liquid/semi-solid samples (transflection) and solid samples (reflection) possible**

»As soon as a lorry with raw materials is in our yard, we take a Petri dish, put the raw material on it, position the dish on the device and analyse the goods. [...] we can decide immediately whether the goods are to be loaded into our silos or not. We used to have to wait two weeks for this – now it's done in no time at all.«

Christiane Kalepp, Quality Assurance Manager of Teigwaren Riesa

AT A GLANCE
Advantages of the Finder SD

Analysis results at the push of a button – reliable analysis results in just a few seconds

- **Easy to use –** any employee can perform analyses independently thanks to the intuitive software operation

- **No use of hazardous chemicals –** employee training for handling chemicals is not required

- **Reduction of annual costs –** for external laboratories

- **Product optimisation –** enables rapid intervention in production

- **Continuous monitoring –** of the substances to be analysed

- **Compliance with the nutrient content declaration –** Finished products according to the nutrition declaration

- **Preventing faulty production –** instead of random samples, all batches can be analysed several times

- **Structured documentation –** in the analysis report for the quality management system and food inspection

- **Proof of quality for suppliers and customers**

- **IP 65 certified –** protected against dust and splashing water

- **Easy cleaning –** for the device andt he accessories

- **Timeless and compact design –** small space required for the analyser

Identify ingredients easily
suitable for many industries

The reliable and compact analysis system Finder SD can be used universally. Whether in the laboratory or directly in production, the robust design enables accurate and reproducible analysis results even under difficult conditions.

Ready-to-use calibrations are already available for various industries and products. For new applications, we will be happy to develop new calibrations for you. Please contact us!
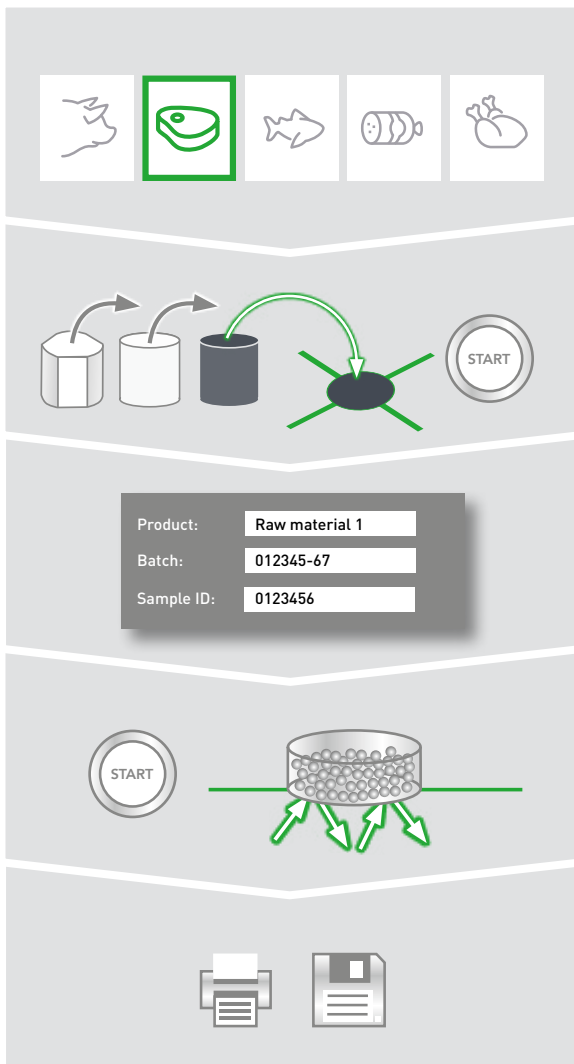
Available applications:
- Raw meat (beef, pork, poultry, lamb, horse, etc.)
- Meat products/sausages
- Raw fish
- Flour (soft wheat flour, whole wheat flour, spelt flour)
- Semolina (durum wheat semolina, whole wheat semolina)
- Potato dough
- Brewering yeast
- Sauces/Marinades

More applications to follow!

SUCCESS IN 5 SHORT STEPS
Test + report at the push of a button

1 Selection
Select the desired application

2 Referencing
When prompted, place the white, black references and, if necessary, place measuring stamp on the measuring window

3 Input

Product: Raw material 1
Batch: 012345-67
Sample ID: 0123456

Enter product names, batch numbers and sample ID, free configuration of what needs to be queried

4 Measurement
Fill sample into the sample cup, place it on the measuring window and measure with one click

5 Report
Save report and print and submit as needed!

PLACE OF USE – EVERYWHERE

Finder SD in the production process

Finder SD with rotator:
- can be used for heterogeneous samples (example: cereals, meat, cheese)

Finder SD with sample cup holder:
- homogeneous to slightly heterogeneous samples (example: powders, pastes, ointments, emulsions and liquids)
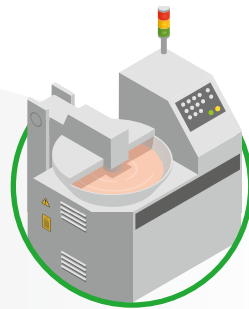
Accessories:
The Finder SD accessories are available separately and enable a wide range of applications for the device.

INCOMING GOODS INSPECTION
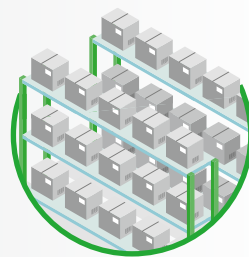Raw materials' inspection
- Inspection of the raw materials' specification
- Safeguarding the process supplies

PROCESS CONTROL
Inspection of intermediate products
- Controlling the production process
- Smart process made possible
- Safeguarding for the process

OUTGOING GOODS INSPECTION
Inspection of final products
- Testing based on customer-specific requirements
- Ensuring quality for customers and consumers

Quality control to build and secure long-term customer relationships

HiperScan GmbH

HiperScan is a spin off company from the Fraunhofer Institute for Photonic Microsystems (IPMS), founded in 2006 in Dresden.
At that time, latest developments in the MEMS scanners formed the basis for a successful company. Using the innovative scanning grating technology of the Fraunhofer Institute, high-quality near-infrared (NIR) analysis systems with an extended measurement range can be produced at lower costs. Thanks to the Apo-Ident NIR analysis system, HiperScan is the market leader in the German pharmacy sector and stands for innovative technology, as well as solutions for quality control for pharmaceutical ingredients. In the next step, HiperScan intends to conquer the food industry with the Finder SD NIR analyser. Latest customer-specific applications are being constantly implemented.

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