



NIR analysis systems

The HiperScan Technology Patented Scanning
Grating Spectrometer

Identification

- + raw materials
- + active substances
- + synthetic materials

Content measurement

- + chemical compounds
- + concentrations of
fat, water, dry matter
and solvents
- + mixtures and blends

Made in Germany

- + technology made in
Dresden, Silicon Saxony
Germany

NIR Spectroscopy

Research results put into practice

NIRS (Near InfraRed Spectroscopy) is an almost ideal method for determining and analysing a wide range of substances and products. As a true "green science", it requires no additional chemicals or solvents. Near-infrared light is absorbed by molecular vibrations of the chemical bonds. The substance-specific absorption of light depending on the wavelength can then be used to determine various parameters without destroying the sample. It is ideal for determining water, fat or protein content and analysing various structural elements of the source material.

In many fields, such as pharmaceuticals, medicine, agriculture, the food industry, waste disposal, and the packaging and plastics industries, this convenient method is already established for quality analysis and process control. However, the high initial costs have often prevented wider application of NIR spectroscopy. This is where HiperScan comes in, using the innovative Scanning Grating Technology developed by the Fraunhofer Institute for Photonic Microsystems. It can be used to produce high-quality NIR analysis systems with an extended measurement range at lower costs.



Analytical methods

- + analyse chemical components
- + determine concentrations
- + measure layer thickness



Applications

- + food, pet food, beverages, agriculture
- + chemical & oil industry
- + pharmaceutical & bio industry

NIR spectroscopy



Quality control

- + incoming inspections
- + process analysis
- + process automation
- + final inspection



Benefits

- + rapid
- + very reproducible
- + universal
- + without destructions



Successful from the start

HiperScan brings NIR Spectroscopy to a new level

The development of micro scanning technology began in 1997. Shortly thereafter, micro scanning mirrors were first produced in large quantities. Continued intensive research into the use of microsystems led to the development in 2004 of entirely new and significantly more cost-effective Scanning Grating Spectrometers. Thus, the foundation was laid for spinning off HiperScan GmbH from the Fraunhofer Institute for Photonic Microsystems in Dresden in 2006.

Since then, the company has become a synonym for high-quality technologies and applications for the analysis of substances in the near-infrared range. The stated aim of HiperScan is to expand the advantages of NIR spectroscopy so that many businesses – even small ones – can benefit from it.

Thus, NIRS becomes a mass application that not only raises the level of quality, but also NIR spectroscopy itself to a new level. HiperScan combines the advantages of NIR spectroscopy with maximum user-friendliness and efficiency for the first time in the Apo-Ident analyser. Impressive accuracy, simple operation, and evaluation within seconds are features of this system, which is optimised for the needs of pharmacists. Apo-Ident for chemists is a high-end system for efficiently testing source materials at low cost.

- + **HiperScan makes NIRS smart.**

HiperScan applications can be easily integrated whilst optimising existing processes.

- + **HiperScan makes NIRS intuitive.**

The software interfaces are user-friendly and self-explanatory.

- + **HiperScan models your NIRS application** and provides useful data preparation.

- + **HiperScan provides fast and easy creation of chemotric models**, even for a large amount of data and provides suitable validation tools.

- + **HiperScan ensures high portability of your data**, thereby guaranteeing their wide-scale use by many users on many devices (at large series).

- + **HiperScan products and services are “Made in Germany”**: expect high-quality and long-lasting devices.

HIPERSCAN RAISES NIR SPECTROSCOPY TO A NEW LEVEL



2017

Finder SD Industry Applications for quality and process control

2016

Launch of Analyser **Finder SD**

2015

More than **1.000 Apo-Ident user**

2014

Infrastructure for Automatic Validation of Large-Scale Chemocetrical Classifiers

2012

Extension of customer service and sales for Apo-Ident and the drug store market

2009

Product launch **SGS1900**
Product launch of **Apo-Ident**

2008

Development of Apo-Ident

2006

Prototyp SGS1900
HiperScan founded (May)

2002

Patent: Scanning Grating Spectrometer (SGS)

1997

Patent: MEMS micro scanning mirror



Our expertise

Chemometric models &
software solutions

HiperScan combines its many years of experience in creating chemometric models with its know-how for intuitive software design in clear and efficient structures. You can build on our expertise and create your own NIRS implementation quick and easy. Simply use a complete, turnkey system or components of HiperScan. The necessary chemometric model for your application can be standardised or individually designed and developed. Fast integration into your processes or software is possible due to open software interfaces (DLLs). HiperScan supports your NIRS solution with appropriate tools for modelling, calibration and validation. Our user-friendly software can be adapted quickly to your desired application, from the logo to the input fields.

Nevertheless, handling remains simple and clear. As a result, a solution that is specific to your needs and that satisfies the current requirements of modern business processes is created. By integrating NIR analysis in your device or application, you can provide an additional function to ensure quality for your customers and to avoid out-of-spec production.

- + **Modelling (calibration)**
- + **Model validation**
- + **Software solution**

Questions?
Please contact us.

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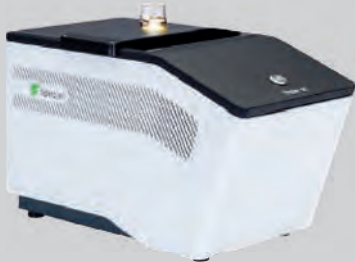
Phone: +49 351 212496- 0 | Fax: +49 351 212496-99

info@hiperscan.com
www.hiperscan.com

Our products

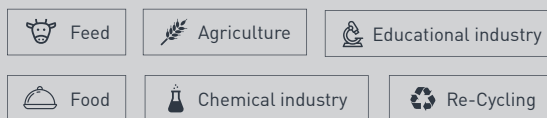
Through our scanning grating spectrometer (SGS) the NIR analysis can now also be used in the areas for which it was previously too costly. Thus, routine checks should be independent of highly specialized laboratories feasible directly in the delivery or

process chain. Such concentration determinations as fat, water or protein content or the identity checks on incoming goods are easily, quickly and safely. HiperScan products and your business opportunities with NIR technology.



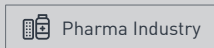
Finder SD

The dustproof Analysis System Finder SD is multifunctional. Due to the units internal calibration standards, the system continuously checks itself or is deliberately recalibrated.



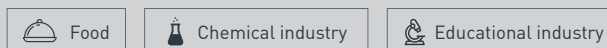
Apo-Ident

Measured parameters in the pharmaceutical industry. The Apo-Ident – an integrated solution for pharmacy laboratories. The turn key solution for pharmacies incoming inspection and documentation of raw materials in <15 seconds.



SGS 1900

With the spectrometer SGS1900 you can use the NIR analysis quickly and easily in your devices or applications. The system is fully integrated and customisable.



Finder SD OEM-Module

The finished analysis system Finder can be customized as an OEM-Element according to requirements for your machines and installation.

