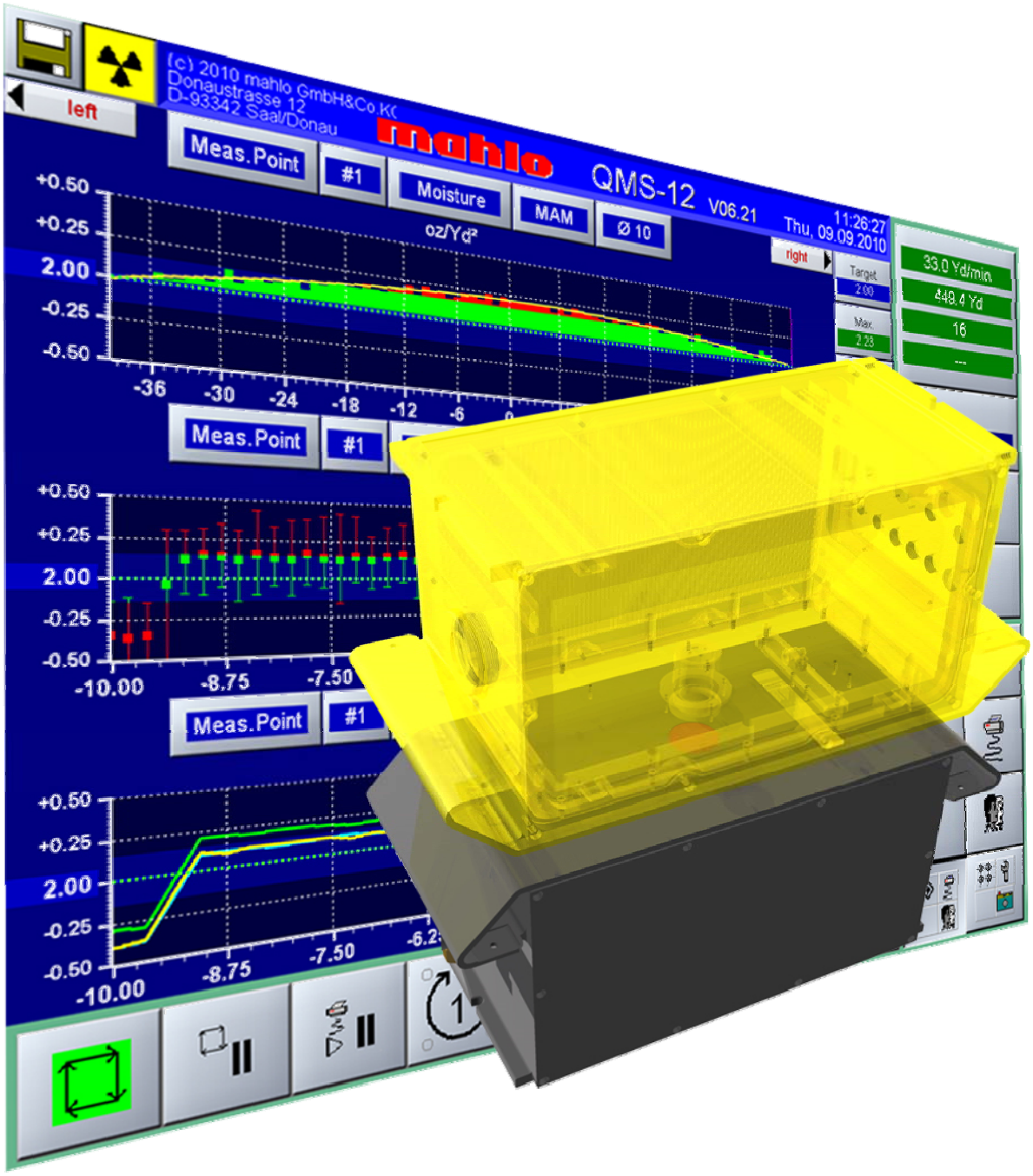
INNOVATION

mahlo
trendsetting technology. worldwide

INFRASCOPE NIR

Online Spectrometer



TEXTILE NONWOVENS PAPER PLASTIC

Quality made in Germany

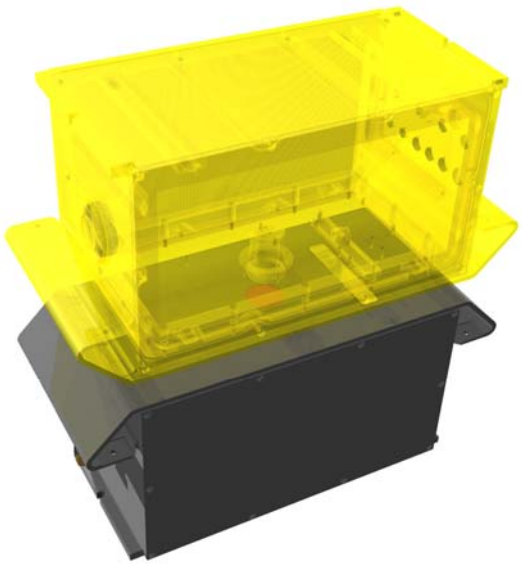
WWW.MAHLO.COM

INFRASCOPE NIR 84-010372-004-en
Subject to revision!
© Mahlo GmbH + Co. KG

TEXTILE NONWOVENS PAPER PLASTIC

INFRASCOPE NIR

Online Spectrometer



Tasks

Contactless and continuous monitoring of all quality parameters with highest accuracy is extremely important for all web producing industries. The Infrascope NIR – Sensor can be widely used in pulp & paper manufacturing, the plastic film & extrusion industry as well as in the coating & converting sector.

Solution

The Infrascope NIR monitors the absorption of infrared energy by components on or in the web in the near infrared region. Measuring over the entire spectrum range and applying multivariate data analyzing tools produces highly accurate calibration results from information in redundant spectra.
The Infrascope NIR is currently available in transmission mode. The reflection mode is already in preparation.

Benefits

- By simultaneously analyzing the entire NIR Spectrum, the sensor is able to discriminate between multiple components in the web.
- Due to very high spectral resolution, the sensor can distinguish between components with nearly similar, but not identical, IR absorption.
- Improved process understanding by on-line NIR spectral measurements and use of multivariate calibration modeling.
- Reduction of waste and reworking through increased quality attribute measurements and optimized process control

Product-Highlights

- ✓ Non-nuclear
- ✓ Contactless, non-destructive
- ✓ Intelligent sensor with fast onboard micro processing
- ✓ High spectral resolution

Measurable materials

	Moisture	Basis weight (non-nuclear)
Paper	✓	✓
Film	✓	✓

Customer Benefits

- ✓ Non-destructive, continuous discrimination between multiple components
- ✓ High measuring accuracy
- ✓ Improved process understanding through online NIR spectral measurements

Specifications

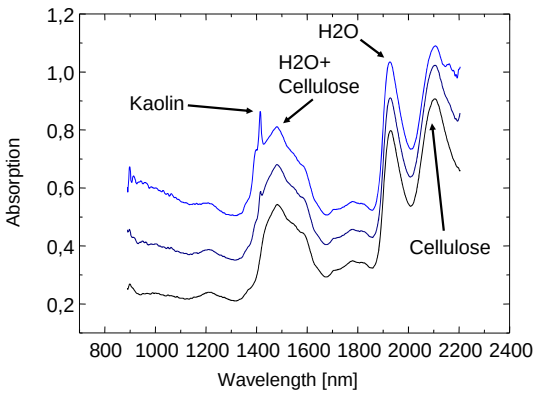
Sensor	INFRASCOPE NIR
Measurement principle	Absorption of infrared energy
Spectral range	1000 nm – 2170 nm
Measurement Range	Paper: 5 g/m² – 300 g/m² Film: 10 g/m² – variable (dependent on material)
Measurement Accuracy	Dependent on material (analysis of material sample necessary)
Measurement Spot Size	25 mm
Measurement Gap	10, 15, 30 mm
Measurement Mode	Transmission Mode
Power Supply	24 V DC
Max. ambient temperature	60 °C

Can be used in

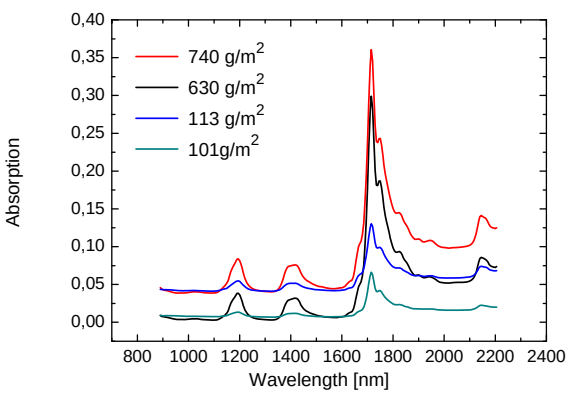
- ✓ Qualiscan QMS

Application Example

Absorption spectra of 150 gsm white paper



Absorption spectra of PVC film with various basis weights



mahlo
trendsetting technology. worldwide

Quality made
in Germany

Measuring systems, control systems, automation:

MAHLO® ENSURES QUALITY. WHEREVER YOU ARE IN THE WORLD.

The best possible technical support and know-how transfer is highly emphasised at Mahlo®. Thanks to many international representatives and service stations, customers around the world are never far from expert assistance. 365 days a year, 24 hours a day – we're there for you. Get in touch with us!

- √ **Over 40 service stations worldwide**
- √ **Direct service and spare parts delivery within 24h**
- √ **Remote diagnostics system**
- √ **Service Hotline: +49-180-5062456**

Mahlo GmbH & Co. KG Germany
Donaustr. 12, 93342 Saal/Donau
Tel.: +49-9441-601-0
Fax: +49-9441-601-102
info@mahlo.com

Mahlo España S.L. Spain
C/ Santa Margarida, s/n – Nave nº13
Poligono Industrial Riera de Caldes – Boada Vell
E08184 Palau Solità i Plegamans (Barcelona)
Tel.: +34-938-640-549
mahlo.espana@mahlo.com

Mahlo Italia S.R.L. Italy
Via Fiume 62, 21020 Daverio
Tel.: +39-03-32-94-95-58
Fax: +39-03-32-94-85-86
mahlo.italia@mahlo.com

Mahlo Ouest S.P.R.L. Belgium
Quartum Center
Hütte 79 - Bte 10
4700 Eupen
Tel.: +32-87-59-69-00
Fax: +32-87-59-69-09
mahlo.ouest@mahlo.com

Mahlo America Inc. USA
P.O. Box 2825, Spartanburg, S.C. 29304
Tel.: +1-864-576-62-88
Fax: +1-864-576-00-09
mahlo.america@mahlo.com

Mahlo do Brasil Controle de Processos Ltda.
Brazil
Rua dos Lírios 849 e 851
Cidade Jardim II - Americana – SP
Brasil CEP- 13466-580
Tel.: +55-19-3407-7954 / +55-19-3601-7363
Fax: +55-19-3405-4743
mahlo.brazil@mahlo.com

WWW.MAHLO.COM

Quality made
in Germany