NIRMaster™
Feed and Forage

Production of compound feeds is a complex matter. Accurate and meaningful nutritional facts are most important. Understanding customer needs in the feed and forage industry, BUCHI has designed the first standalone FT-NIR Spectrometer specifically for that industry – the NIRMaster™.

NIRMaster™
Bring Light into Your Production

Get more analysis information, higher productivity, higher quality and better understanding in feed production with polarization Fourier-Transform Near-Infrared Spectroscopy (FT-NIRS). Rapidly control the quality and nutritional facts of your feed ingredients, pre-mix, and final products using BUCHI NIRSolutions. The NIRMaster™ is the first dedicated FT-NIR standalone spectrometer. Its easy-clean design and high ingress protection (IP) meet the specific needs for at-line analysis in compound feed production.

Where BUCHI NIRSolutions can help you:

BUCHI NIRSolutions provides dedicated at-line and off-line NIR equipment. These instruments set up at different locations in the production plant provide significant information for compound feed production and quality control to improve your business.

A contributor to customers profit

"We use NIR as a reliable, cost effective and fast analytical method. We choose to work with BUCHI Labortechnik who has 70 years of experience in laboratory equipment and more than 10 years in NIR spectroscopy. Connected in a global NIR network, we keep a constant overview of our worldwide production sites and in the same way guarantee a standardized process and time saving for data treatment." A premium brand in pet food industry

Many different constituents of compound feed such as moisture (dry matter), fat, protein, ash, NDF, ADF, amino acids, starch, total sugar, crude fiber and many more can be qualified and quantified. Please refer to our application overview.

1. Quality control of feed ingredients

At raw material intake:

- Identify and qualify incoming goods
- Rapidly quantify raw material and components (e.g. alfalfa, barley, canola wheat, cassava, fish meal, soybean meal)
- Establish a firewall against adulteration (e.g. wheat gluten, melamine)

2. Determination of pre-mixes and production control

At production site:

- Monitor manufacturing processes
- Optimize your formulation
- Rapidly quantify constituents
- Control component levels (e.g. blending with a specific level of fat or protein)

3. Quality control of finished feeds

At production site:

- Rapidly release products
- Avoid label claims
- Check production specification
- Remove bottlenecks in production and delivery

NIRMaster™ Makes Your Job Easy
The Dedicated Solution for Your Needs

The competitiveness of the compound feed industry forces producers to take strategic actions for quality control and product optimization. BUCHI FT-NIR polarization technology makes this job easier!

1. Easy-clean design increases food safety day by day

The hygienic easy-clean design and high ingress protection (IP) support your routine work in harsh environments. The NIRMaster™ is available in food-grade PMMA housing or stainless steel housing.

2. Polarization FT-NIR reduces costs

The modern and robust NIRMaster™ based on fast and precise polarization FT-NIR technology, provides accurate and reliable results for multiple parameters simultaneously. Improve your production process with this fast and durable system.

3. Faster results speed up your decisions

The NIRMaster™ with its built in PC, preinstalled software and quick-start calibrations can be quickly set up and put into operation. With FT-NIR you can analyze your samples within seconds.

4. Reliable hardware for reliable business

The NIRMaster™ is supported by a twin-lamp safeguard for uninterrupted operation even in cases of lamp failure. Based on robust and accurate polarization technology it is more shock resistant than any other FT-NIR.

5. Easy-operation for a lean workflow

The NIRWare Operator is the easy to use and ergonomic software interface which can be tailored to your specific needs. Inputs are collected easily and the analysis results are displayed in an optimal way. With an optional touch screen and robust accessories, like a barcode scanner or the easy-spin drive, efficiency in daily work can be improved even more.

6. Quick-start calibrations to gain time

In cooperation with many of BUCHI's long term customers we have concentrated data and experience in our pre-calibrations. These powerful quick-start calibrations enable you to efficiently analyze a broad range of your sample constituents.

7. Easy calibration transfer preserves competence

BUCHI NIR spectrometers are identical by design. Spectra and calibrations can be exchanged between laboratory and production units - without any calibration standardization. Furthermore, your existing calibrations, even data from other suppliers, can be transferred easily to your new BUCHI FT-NIR spectrometer.

8. NIRCal creates better performance

Use the powerful NIRCal software to evaluate your production data. Keep an eye on what is going on at your sites. For evaluating or updating a calibration NIRCal is the ideal tool. The patented Calibration Wizard and the comprehensive NIRCal Toolbox support even unexperienced users building up powerful calibrations.

9. NIR Networking for local and global control

For local data handling the LIMS interface connects your BUCHI NIR to laboratory information or formulation software (like Brill Formulation®, Aunir Specman® Gold or SAP®) using standard interchange formats. For global players NIRAnywhere is the comprehensive network management tool. Headquarters can automatically backup data and update applications by remote connection. You gain full access and transparency to all your production and QC relevant data.

10. NIRMaster™ as part of all-embracing NIRSolutions

BUCHI NIRSolutions not only offers leading hardware technology, but also the most comprehensive standard software, applications and reference methods as well as quality service and support to help you work effectively and efficiently. The BUCHI NIRMaster™ is an integral part of BUCHI NIRSolutions.

NIRSolutions®
Listening, Understanding and Responding

BUCHI is the world leading supplier of dedicated solutions for feed industry. We provide analytical equipment fitting the needs of our customers. The long history of BUCHI in this special market segment gives our customers the possibility to choose the best solution for their needs. We provide the classical reference methods and NIR for quality control of feed and forage.

Enter the NIRSolutions community

The BUCHI NIRSolutions community is built by our international customers from the feed and forage industry and our global expert network. Based on experience and know-how we have designed and created the BUCHI NIRMaster™ together.

Global expert network

BUCHI has developed a global unique network of NIR specialists in feed process control, present in more than 60 countries. Our network is based on shared experiences, fast and flexible teams, intensive trainings and access to all relevant resources. These synergies are key features for our unique support structure.

Global service network & training

Our excellence is global and we have local services to fulfill your requirements. We offer service contracts, preventive maintenance protocols, IQ/OQ, on-site service and training. We guarantee fast response, phone and web-based support. For our key customers we offer tailored solutions, services and support.

Reference methods & feasibility studies

BUCHI has gained high expertise and market share with relevant reference methods like Kjeldahl or extraction, which are official methods in food and feed control. The accuracy and precision of our NIR applications is based on the knowledge of both, NIR and reference methods. We support you with feasibility studies and professional competence.

Advantages of BUCHI NIR Spectrometers:

Compared to classical analytical methods the NIRMaster™

- Enables you to have faster analytical results
- Speeds up decision making
- Grants you low analysis costs per sample
- Measures several parameters simultaneously
- Improves quality and optimizes overall profit

Advantages of polarization FT-NIR over any other NIR technology

- Most accurate and reproducible NIR technology
- The polarization interferometer is insensitive to vibration
- Increase of information content and application capabilities
- Calibration transfer without any standardization
- Twin-lamp safeguard for uninterrupted operation

BUCHI NIRSolutions covers all your needs - from laboratory to production environment

Using the same technology as the NIRMaster™ the NIRFlex N-500 is the flexible solution for your laboratory. Swap between different measurement cells – fitting your demands. Our customized solutions will make your BUCHI FT-NIR spectrometer become more versatile: from nutritional aspects to amino acids content, up to the detection of adulteration such as melamine.

NIRMaster™
The Complete Solution

Performance
- Measurement of several parameters simultaneously
- Low analysis costs per sample

Durability
- Robust technology
- High ingress protection (IP)
- Standardization-free calibrations

Speed
- Quick-start calibrations
- Faster analytical results
- Speed up decision making

Reliability
- Accurate and robust polarization FT-NIR
- Twin-lamp safeguard

Simplicity
- Built-in PC
- Touch screen use
- Easy-clean design

Competence
- Comprehensive applications
- Global expert network
- Best service and support

Quality in your hands

Find your BUCHI Contacts:

BÜCHI Labortechnik AG
CH – 9230 Flawil 1
T +41 71 394 63 63
F +41 71 394 65 65
buchi@buchi.com
www.buchi.com

BUCHI UK Ltd.
GB – Oldham OL9 9QL
T +44 161 633 1000
F +44 161 633 1007
uk@buchi.com
www.buchi.co.uk

BUCHI Hong Kong Ltd.
HK – Central
T +852 2389 2772
F +852 2389 2774
china@buchi.com
www.buchi.com.cn

Nihon BUCHI K.K.
JP – Tokyo 110-0008
T +81 3 3821 4777
F +81 3 3821 4555
nihon@buchi.com
www.nihon-buchi.jp

BUCHI Korea Inc
KR – Seoul 153-782
T +82 2 6718 7500
F +82 2 6718 7599
korea@buchi.com
www.buchi.com

BÜCHI Labortechnik GmbH
DE – 45127 Essen
Freecall 0800 414 0 414
T +49 201 747 490
F +49 201 237 082
deutschland@buchi.com
www.buechigmbh.de

BÜCHI Labortechnik GmbH
NL – 3340 AC
Hendrik-Ido-Ambacht
T +31 78 684 94 29
F +31 78 684 94 30
netherlands@buchi.com
www.buchi.nl

BUCHI Shanghai
CN – 200052 Shanghai
T +86 21 6280 3366
F +86 21 5230 8821
china@buchi.com
www.buchi.com.cn

BUCHI India Private Ltd.
IN – Mumbai 400 055
T +91 22 667 18983 / 84 / 85
F +91 22 667 18986
india@buchi.com
www.buchi.in

BUCHI Canada Ltd.
CA – Thornhill, Ontario L4J 6Z2
T +1 416 277 7407
F +1 905 764 5139
canada@buchi.com
www.mybuchi.com

BUCHI Sarl
FR – 94656 Rungis Cedex
T +33 1 56 70 62 50
F +33 1 46 86 00 31
france@buchi.com
www.buchi.fr

BUCHI Italia s.r.l.
IT – 20090 Assago (MI)
T +39 02 824 50 11
F +39 02 57 51 28 55
italia@buchi.com
www.buchi.it

BUCHI (Thailand) Ltd.
TH – Bangkok 10600
T +66 2 862 08 51
F +66 2 862 08 54
bacc@buchi.com
www.buchi.com

PT. BUCHI Indonesia
ID – Tangerang 15321
T +62 21 537 62 16
F +62 21 537 62 17
indonesia@buchi.com
www.buchi.com

BUCHI Corporation
US – New Castle,
Delaware 19720
Toll Free: +1 877 692 8244
T +1 302 652 3000
F +1 302 652 8777
us-sales@buchi.com
www.mybuchi.com

We are represented by more than 100 distribution partners worldwide.
Find your local representative at: www.buchi.com

11592304 en 1102 / Technical data are subject to change without notice/ Quality Systems ISO 9001
The English version is the original language version and serves as basis for all translations into other languages.

Printed on Paper FSC