NIRFlex® N-500
The modular FT-NIR spectrometer

The N-500 FT-NIR spectrometer provides reliable analysis results for quality control as well as research and development in the pharmaceutical, chemical, food, beverage and feed industry. The NIRFlex N-500 offers a wide range of measuring cells and accessories for highest performance.

Reliable and flexible
Precise and accurate results with flexible accessories for a broad range of samples

Fast, safe and easy
Rapid product analysis without sample preparation and need of chemicals

Highly efficient
Continuous operation (24/7) with a low cost of ownership
NIRFlex® N-500
Key features and advantages

The modular concept comprising one spectrometer unit and various measurement options allows individual configurations to satisfy all your requirements. The various NIRFlex N-500 options can be exchanged in seconds for different applications.

NIRFlex N-500 Polarization Interferometer

Add-on XL
- ideal for sample measurements in any required type of container
- powders, for example, can be analyzed directly in their sample bags
- special adapters for transflectance accessory, viscous cup and closed cup.

Add-on Petri dish
- for measurements using standard glass Petri dishes or the high performance sample cup
- can be expanded to accommodate liquid samples using transflectance devices

High-performance sample cup

Add-on 6 vials
- autosampler with six positions
- glass vials with diameters of 10 to 15 mm can be applied

Transmission cuvette

Vial adapter
### Sample types

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Powders</td>
<td>Granulate</td>
</tr>
<tr>
<td>Granulate</td>
<td>Gels</td>
</tr>
<tr>
<td>Gels</td>
<td>Tablets, capsules</td>
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<tr>
<td>Tablets, capsules</td>
<td>Liquids</td>
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</tbody>
</table>

### Sampling techniques

<table>
<thead>
<tr>
<th>Technique</th>
<th>Description</th>
<th>Advantage</th>
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<tbody>
<tr>
<td>Transmission</td>
<td>This is the preferred method for testing liquids. NIR radiation is sent through a defined pathlength of the liquid and the transmitted light contains the spectral information.</td>
<td>Precisely defined conditions and high radiation yield.</td>
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<tr>
<td>Diffuse reflection</td>
<td>Primarily used for testing powders but can also be used for granules and other solids, gels and pastes. NIR radiation penetrates the sample and is diffracted and/or reflected.</td>
<td>No sample preparation required to receive chemical and physical information (e.g. sample size).</td>
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<tr>
<td>Transfection</td>
<td>With special accessories, reflection options can be used in transfection mode as well. The NIR radiation passes through the liquid, is reflected and passes the sample a second time.</td>
<td>Reflection accessories can easily be used for the measurement of liquids as well.</td>
</tr>
<tr>
<td>Diffuse transmission</td>
<td>Primarily used for testing of tablets, capsules, powders and ointments. NIR radiation penetrates the sample and is diffracted and/or reflected. The transmitted light contains the spectral information.</td>
<td>Spectral information from the whole cross section of solid samples.</td>
</tr>
</tbody>
</table>

Watch the video of NIRFlex modularity in routine use

www.buchi.com/NIRFlex
NIRFlex N-500: Your most important benefits

Reliable and flexible
- Precise and accurate analysis results due to highest wavelength precision
- Direct and effortless transfer of calibrations from instrument to instrument
- Precisely analyzes different types of sample (solids, powders, tablets, granules, pastes, liquids, etc.) by dedicated measuring options

Fast, safe and easy
- Delivers results in seconds
- Delivers results for multiple parameters simultaneously
- No chemicals or solvents
- User friendly and intuitive handling

Highly efficient
- Fast analytical results allow rapid process optimization
- Low cost of ownership (common spare parts are user-exchangeable, no periodic instrument re-calibration required etc.)
- Continuous operation due to the twin lamp safeguard

“The BUCHI NIRFlex N-500 is easy to use. We can rapidly obtain accurate analytical results for every finished product.” Liu Lingli, Manager Analytical Testing, Xiwang Sugar Holdings Company Limited, China
Read more about our customers http://www.buchi.com/our-customers

Complete your portfolio

Quantitative quick start calibrations
Pre-calibrated applications to measure e.g. rapeseed, meat or dairy products.

LIIMS Software Interface
Automated result data management

Performance Verification KIT
Standards for the NIRFlex PQ compliant to the EU, U.S. and Japanese Pharmacopeia.

NIRMaster™
IP54 / Pro IP65
FT-NIR spectroscopy
At-line solution

www.buchi.com/nir

Quality in your hands