



# 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



-  NIRFlex Solids
-  NIRFlex Fiber Optic Module
-  NIRFlex Liquids
-  NIRFlex Solids Transmittance



NIRFlex Solids



#### 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 transmittance 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 transmittance devices



#### High-performance sample cup



Transmittance cover



#### Add-on 6 vials

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



NIRFlex Liquids



Transmission cuvette



Vial adapter



NIRFlex Fiber Optic module



Fiber Optic Solids



Transflectance adapter



NIRFlex Solids transmittance



Sample plate 10 tablets



Sample plate 30 capsules

## Sample types



Powders



Granulate



Gels



Tablets,  
capsules



Liquids

## Sampling techniques



### Transmission

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.

Advantage: precisely defined conditions and high radiation yield.



### Diffuse reflection

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.

Advantage: no sample preparation required to receive chemical and physical information (e.g. sample size).



### Transflection

With special accessories, reflection options can be used in transflection mode as well. The NIR radiation passes through the liquid, is reflected and passes the sample a second time.

Advantage: reflection accessories can easily be used for the measurement of liquids as well.



### Diffuse transmission

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.

Advantage: spectral information from the whole cross section of solid samples.

Watch the video of NIRFlex modularity in routine use  
[www.buchi.com/NIRFlex](http://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

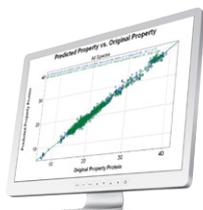
- Fast analytical results allow rapid process optimization
- Low cost of ownership (common spare parts are user-exchangeable, no periodic instrument re-calibration required etc.)
- Continuous operation due to the twin lamp safeguard

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*"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>

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## Complete your portfolio



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



**LIMS 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

