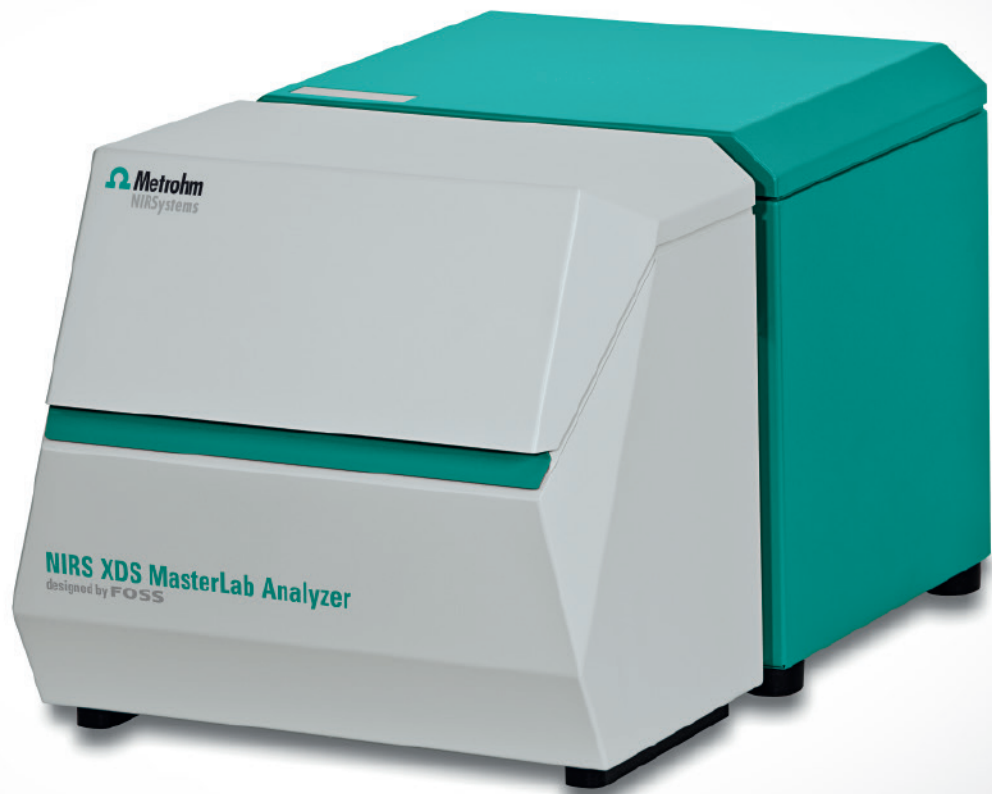


# NIRS XDS MasterLab Analyzer



Rapid, non-destructive analyses of tablets, capsules,  
and other solid dosage forms

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The NIRS XDS MasterLab Analyzer enables manufacturers in the pharmaceuticals industry to quickly analyze solid dosage forms, such as tablets, capsules, caplets, gel tablets, and gel capsules, without destroying the sample. The NIRS XDS MasterLab Analyzer can also be used to analyze solids in vials. The samples are analyzed in either reflection or transmission mode.

A flexible slide enables xy positioning of samples on trays making it possible to analyze multiple tablets and/or vials. Analysis of individual samples is optimized by an iris. An optional coarse granular sample cell for coarse granular substances extends analysis to practically any solid form, ranging from fine powders to coarse granular materials, such as pellets and flakes.

**The NIRS XDS MasterLab Analyzer is ideal for:**

- quality control of the whole spectrum of solid dosage forms, such as layered, coated or cored tablets, capsules, gel tablets, and gel capsules.
- replacing or freeing up other more costly routine tests, such as HPLC methods
- shortening production processes and quarantine times



## Benefits for the user

- Saves time – no need to prepare samples; provides analysis results in real-time
- Flexible – custom trays for tablets and vials can be used
- Simple to use – automated analysis of multiple samples
- Simple to transfer methods and calibration models from instrument to instrument
- Complies with regulations in the regulated environment

## Key features

- Reflection and transmission analyses in one instrument
- Sample slide for xy positioning of trays with multiple tablets or vials, iris for individual samples, optional coarse granular sample cell for coarse granular substances
- Optimal sample analysis by adapting the measuring spot to the diameter of the sample vials or tablets
- Universal interface for quickly changing the measuring modules in just seconds
- Network-compatible – central result and data management (client-server solution)

## Technical specifications

<b>Measuring mode</b>	Reflection and transmission
<b>Sample interface</b>	Direct analysis
<b>Wavelength range</b>	
<b>Reflection</b>	400–2,500 nm
<b>Transmission</b>	800–1,650 nm
<b>Measuring module</b>	Hot-swappable
<b>Detectors</b>	
<b>Reflection</b>	Silicon (400–1,100 nm), lead sulfide (1,100–2,500 nm)
<b>Transmission</b>	InGaAs (indium gallium arsenide) 800–1,650 nm
<b>Data collection speed</b>	2 scans/s
<b>Data point interval</b>	0.5 nm
<b>Wavelength accuracy (currently recognized standard)</b>	
<b>Reflection</b>	< 0.05 nm (SRM 1920)
<b>Transmission</b>	< 0.05 nm (Metrohm NIRS wavelength standards)
<b>Wavelength precision<sup>1</sup></b>	< 0.005 nm
<b>Wavelength precision<sup>2</sup> (instrument to instrument)</b>	< 0.020 nm
<b>Stray light</b>	< 0.1% at 2,300 nm
<b>Photometric linearity</b>	< 1% of the measured value
<b>Bandpass</b>	
<b>Reflection</b>	8.75 ±0.10 nm
<b>Transmission</b>	9.50 ±0.10 nm
<b>Noise (RMS)</b>	
<b>Reflection</b>	
400–700 nm	< 50 micro AU
700–2,500 nm	< 20 micro AU
<b>Transmission</b>	
850–1,100 nm	< 30 micro AU
1,100–1,600 nm	< 20 micro AU
<b>Weight</b>	39.0 kg (86.0 lbs)
<b>Dimensions (W × H × D)</b>	380 × 346 × 559 mm (15" × 13.6" × 22")
<b>Operating temperature range</b>	4.5–35°C (40–95°F)
<b>Relative humidity</b>	10–90% RH, non-condensing

<sup>1</sup> based on a single analyzer

<sup>2</sup> based on a group of analyzers

# Ordering information

## 2.921.1310 NIRS XDS MasterLab Analyzer

### Comprised of:

- 1.921.0010 NIRS XDS Monochromator
- 1.921.0310 NIRS XDS MasterLab Module
- 6.7415.000 NIRS XDS iris
- 6.7400.000 NIRS XDS accessory kit
- 6.7440.580 Transmission standard for MasterLab
- 6.7410.000 NIRS XDS tray for reflection standard
- 8.921.8003EN Manual for NIRS XDS MasterLab Analyzer

### Requires Vision Air software (select one of the following versions)

- 6.6072.208 Vision Air 2.0 Complete
- 6.6072.207 Vision Air 2.0 Network Complete
- 6.6072.209 Vision Air 2.0 Pharma Complete
- 6.6072.210 Vision Air 2.0 Pharma Network Complete

### Tablet transmission measurement requires certified standards

- 6.7450.020 NIRS tablet transmission standard

### Reflection measurement (requires certified standards (select one of the following))

- 6.7450.000 NIRS reflection standard, set of 2
- 6.7450.010 NIRS reflection standard, set of 7 (for the regulated environment)

### Accessories

- 6.7400.010 NIRS liquid sample kit transflection (6 transflection vessels, 3 diffuse reflectors, gold, with total pathlengths of 1 mm, 2 mm, and 4 mm)
- 6.7401.000 NIRS transflection vessel, optically flat
- 6.7402.020 NIRS disposable backs for 6.7402.030 100 pcs.
- 6.7402.030 NIRS mini sample cups, 10 pcs. incl. 100 disposable backs
- 6.7402.040 NIRS XDS coarse granular sample cell
- 6.7410.010 NIRS MultiVial tray for 4x5 15 mm vials
- 6.7410.020 NIRS MultiVial tray for 3x5 19 mm vials
- 6.7410.030 NIRS MultiVial tray for 3x5 22 mm vials
- 6.7410.040 NIRS MultiVial tray for 2x3 27 mm vials
- 6.7410.050 NIRS MultiVial tray for 2x3 29 mm vials
- 6.7420.000 NIRS diffuse reflector, gold, 1 mm total pathlength
- 6.7420.010 NIRS diffuse reflector, gold, 2 mm total pathlength
- 6.7420.020 NIRS diffuse reflector, gold, 4 mm total pathlength
- 6.9974.XXX NIRS customized tray

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