NIR Spectrophotometer - Near Infrared Analyzer with Integrating Sphere - 700-2500 nm - 12 nm Band

Model **MSSP-LIF460SWISS** | Brand **Master Science**







The Master Science NIR Spectrophotometer measures diffuse reflectance from 700 to 2500 nm through an integrating sphere. Samples go into a cup as they are, with no pre-treatment and no damage to the material.

KEY HIGHLIGHTS

- No sample preparation
- Several results at once
- Reliable on uneven samples
- Self-checking
- Shared calibrations

AT A GLANCE

700 to 2500 nm WAVELENGTH RANGE	**12 nm** SPECTRAL BANDWIDTH
±0.2 nm WAVELENGTH ACCURACY	**≤0.05 nm** WAVELENGTH REPEATABILITY

Request a Quotation
Contact us for pricing, configuration options and delivery details.

support@themsci.com
www.themsci.com

Scan to view online

Overview

Several components, such as moisture, fat, protein and amino acids, are reported together in about one minute. Calibration models cover agricultural feed, grain and oil foods, wine and starch, and fermented products such as soy sauce.

Key Benefits

No sample preparation
the Master Science NIR Spectrophotometer reads the sample directly in its cup.

Several results at once
multiple components in one scan.

Reliable on uneven samples
large sampling spot and rotating table.

Self-checking
built-in PTFE reference and polystyrene wavelength standard.

Shared calibrations
models transfer between instruments.

For UV-Vis absorbance work, see the Master Science double beam UV-Vis spectrophotometer.

Technical Specifications

GENERAL

Brand	Master Science
Model Number	MSSP-LIF460SWISS
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Measurement Mode	Integrating sphere, diffuse reflection
Analysis Time	1 min, adjustable
Sample Cups	Φ90 about 120 g; Φ70 about 60 g; Φ30 about 12 g
Calibration	Quantitative: LPLS local partial least squares; qualitative: DPLS

OPTICAL PERFORMANCE

Wavelength Range	**700 to 2500 nm**
Spectral Bandwidth	12 nm
Wavelength Accuracy	**±0.2 nm**
Wavelength Repeatability	**≤0.05 nm**
Stray Light	≤0.1%
Absorbance Noise	≤0.0005 Abs
Light Source Lifetime	More than 5000 hours

DIMENSIONS & WEIGHT

Dimensions (L×W×H)	365 × 295 × 157 mm
Package Dimensions	550 × 520 × 400 mm
Net / Gross Weight	18 kg / 21 kg

COMMON PROBLEMS AND HOW THIS ANALYZER HELPS

Common Problems and How This Analyzer Helps	How the Master Science NIR Spectrophotometer shortens compositional testing:
Slow wet-chemistry methods	results in about one minute.
Samples destroyed by testing	non-destructive measurement.
Poor repeatability on coarse material	rotating cup averages the sample.
Drift over time	automatic reference and wavelength checks.

Applications

The Master Science NIR Spectrophotometer is used for
Agricultural feed Grain and oil foods Wine and starch
Soy sauce and fermentation products

Optics

- Integrating sphere diffuse reflection system
- Automatic reference correction
- Wavelength monitoring

Sampling

- Sample rotating table
- Cups and accessories for particles, powders, liquids and films

Data

- Ambient temperature and humidity stored in each spectrum file
- LPLS and DPLS calibration algorithms