DS2500 Solid Analyzer

Near-infrared spectroscopy system for solid samples

HIGHLIGHTS

- Excellent measuring sensitivity
- For near-infrared and visible wavelength measurements
- Multiple parameters can be determined with a single measurement
- Results in less than a minute
- Robust design for measurements in the production environment

Ω Metrohm

DS2500 Analyzer –
why you should prefer
a dispersive system

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Quantification of analytes in the lower ppm range is a challenge for near-infrared spectrometers. Dispersive systems with their unmatched signal-to-noise ratio are the preferred solution here. The D(ispersive)S(ystem)2500 Analyzer from Metrohm is an ideal tool for such complex tasks, for solid as well as liquid samples.

Extended wavelength range for measurements in the near-infrared and the visible range

The DS2500 Analyzer is designed for typical half widths of NIR signals (up to 30 nm) and offers a resolution of 8.75 nm over a wavelength range of 400–2500 nm. Hence, the DS2500 Analyzer covers both the near-infrared range and the visible range. This means that the DS2500 Analyzer, unlike FT systems, can also detect color changes of the sample, e.g., caused by aging.

Function / feature	Customer benefit
Outstanding signal-to-noise ratio	Analysis of low concentrations down to 500 ppm in solids
Wavelength range 400 – 2500 nm	Superior application flexibility

Besides superior sensitivity, system robustness is critical for reproducible results. Especially, if used at-line in the production process or in environments characterized by high humidity or dust load, system robustness can make all the difference.

The DS2500 Solid Analyzer with its IP65 certified housing and only one rotating optical element is a highly robust solution providing excellent protection against environmental influences even in high vibration environments. The rotating high-precision grating used to disperse light guarantees fast data acquisition so that results are obtained within 30 seconds.

Function / feature	Customer benefit
IP65 (DS2500 Solid Analyzer)	Reliable analyses even at high humidity and dust levels
Dispersive holographic high-precision grating	Maximum system stability and fast results within 30 seconds

Ideal solution for fast, simple and robust routine analysis

Different solids require different kinds of sample presentation. For inhomogeneous samples, it is mandatory to cover the random distribution of the contained target analytes, for example, by using a larger diameter of the scanning beam or by rotating the sample holder.

The DS2500 Solid Analyzer (2.922.0010) with its integrated rotating sample holder, a 15.5 mm diameter scanning beam, and various different sample containers available, provides everything it takes for straightforward operation by anyone including shift personnel. This ensures fast and reliable analysis of both homogeneous and inhomogeneous solids of any kind.

Function / feature	Customer benefit
Integrated rotating sample holder	High reproducibility of results even for inhomogeneous samples by automatic analysis of the sample in different positions.
15.5 mm scanning beam	Faster results as the large diameter of the scanning beam covers a larger part of the sample.

DS2500 Solid Analyzer accessories

ORDERING INFORMATION

Instrument	
2.922.0010	DS2500 Solid Analyzer
6.7402.050	DS2500 Large Sample Cup
6.7490.430	DS2500 Slurry Cup
6.7425.100	DS2500 Iris
6.7402.030	NIRS mini sample cups
6.7400.010	NIRS Liquid Sample Kit Transflection
6.7490.440	DS2500 MultiSample Cup 15 mm
6.7490.450	DS2500 MultiSample Cup 19 mm
6.7490.460	DS2500 MultiSample Cup 22 mm
6.7490.470	DS2500 MultiSample Cup 28 mm

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DS2500 Holder
For analysis of medium, non-homogeneous sample quantities

DS2500 Large Sample Cup
For analysis of larger, non-homogeneous sample quantities

DS2500 Iris
For analyzing small and medium sample quantities directly through a glass container

DS2500 MultiSample Cup
For automated analysis of small and medium sample quantities directly through a glass container

DS2500 Slurry Cup
For analysis of creams and viscous substances

NIRS gold diffuse reflector
For analysis of liquids in transflection mode