



# DS2500 Liquid Analyzer

Near-infrared spectroscopy system for liquid 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

# DS2500 Analyzer – why you should prefer a dispersive system

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 for those tasks. 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 100 ppm in liquids
Wavelength range 400 – 2500 nm	Superior application flexibility

Besides superior sensitivity, system robustness is critical for reproducible results. Especially, if used at-line in production or in environments characterized by

high humidity or dust load, system robustness can make all the difference.

The DS2500 Liquid Analyzer with its IP54 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
IP54 (DS2500 Liquid 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

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Liquid samples absorb light very differently depending on the concentration of the analyte. This variability can be controlled by adjusting the path length of the sample container. For reproducible measurement results, it is therefore critical that this path length is always the same for the sample container as defined for a particular application.

With the DS2500 Liquid Analyzer, you can choose from a variety of cuvettes, flow cells and disposable vials, which gives you the flexibility to adapt to the respective sample. Intelligent sample holders in combination with SOPs help prevent errors in routine operation that could otherwise result from accidentally selecting the wrong sample containers. The auto start function makes routine measurements simple and convenient. There is not even the need

to press a start button, as the measurement is started automatically when the lid of the DS2500 Liquid Analyzer is closed.

Function / feature	Customer benefit
Intelligent sample holder	Prior to each analysis, the correlation between the sample container and the selected SOP is automatically checked. This also ensures that the spectra are correctly recorded during routine operation.
Auto start function	The analysis starts automatically after the lid of the DS2500 Liquid Analyzer is closed.

## DS2500 LIQUID ANALYZER ACCESSORIES



### DS2500 Holder for cuvettes

Available for cuvette path lengths of 1mm, 2mm, 5mm and 10mm for precise analysis of liquids.



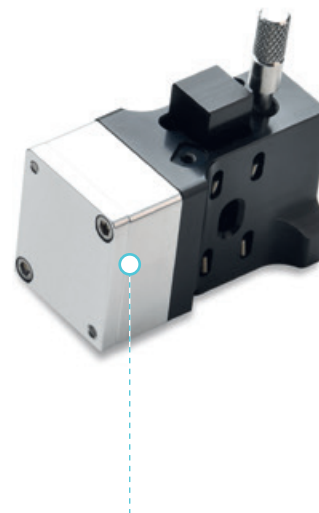
### DS2500 Holder for flow cells

For automated analysis of liquids compatible with cuvettes with dimensions of  $h \times w \times d = 35 \text{ mm} \times 12.5 \text{ mm} \times 12.5 \text{ mm}$  and a window height of 8.5 mm.



### DS2500 Holder for disposable vials

Available for disposable vial path lengths of 2 mm, 4 mm, 8 mm and 10 mm for fast and cleaning-free analysis of liquids.



### DS2500 Wavelength Standard

Optional external standard for calibration of the DS2500 Liquid Analyzer according to SRM 2065 specifications.

## ORDERING INFORMATION

Instrument	
2.929.0010	DS2500 Liquid Analyzer
6.7492.000	DS2500 Holder 2mm disposable vials
6.7492.010	DS2500 Holder 4 mm disposable vials
6.7492.020	DS2500 Holder 8 mm disposable vials
6.7492.030	DS2500 Holder 10 mm disposable vials
6.7492.100	DS2500 Holder 1 mm cuvette
6.7492.110	DS2500 Holder 2 mm cuvette
6.7492.120	DS2500 Holder 5 mm cuvette
6.7492.130	DS2500 Holder 10 mm cuvette
6.7493.000	DS2500 Holder flow cell
6.7494.000	DS2500 Liquid Wavelength Standard