FALCATA LAB

Flexible Spectroscopic Transflection Probe

High-precision immersion probe for transflectance measurements in the laboratory

The Hellma Falcata Lab has a compact design and was specially developed for applications with small volumes. It is suitable for measuring transparent or slightly turbid media.

Typical areas of application for this probe are

- Measurement in laboratory reactors
- Research and development
- Reaction monitoring during chemical synthesis
- Determination of color numbers

SPACE-SAVING INSTALLATION

The small outer diameter allows integration in confined spaces such as laboratory reactors or small sample vessels.

For particularly narrow spaces, this probe model is also available in outer diameters of 3 mm and 4 mm.

LOWER SAMPLE REQUIREMENT

Thanks to the slim design, far less sample material is required for a measurement than with other commercially available immersion probes.

HIGH AVAILABILITY

The components of this probe model are kept in stock. This ensures rapid availability. The supply of spare parts is guaranteed.

WIDE RANGE OF APPLICATIONS DUE TO VARIABLE PATH LENGTHS

The Falcata Lab (Ø 6 mm) is the all-rounder among laboratory probes. Easily interchangeable path length inserts allow the path length to be individually selected for each task. The user can change the path length inserts himself and measure with high precision at the same time. Spectra can be optimally determined as the signal intensity can be adapted to samples with different concentrations.

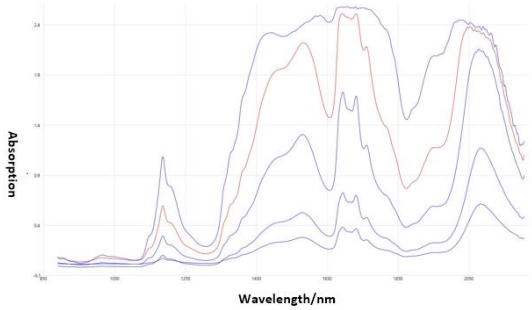

Figure 1: Spectra of ethanol with different path lengths

BENEFITS

- Windows and mirrors are made of the high-purity quartz glass "Extended"
- High-transmission optics and minimal stray light values
- Flow is only minimally affected.

Model	Falcata Lab
Measuring principle	Transflection
Outer diameter	3 mm /4 mm /6 mm
Optical Path	1 mm / 2 mm / 5 mm / 10 mm / 20 mm (Ø 6 mm) 5 mm / 10 mm (Ø 3 mm, 4 mm) Opt. Tol.: ±0,01 mm
Optical Material	Quartz Glass
Sealing Technology	Epoxy Adhesion
Probe Body Material	Stainless Steel 1.4435/1.4404 (316L)
Spectral Range	UV/Vis NIR
Wavelengths	UV/Vis: 210 - 1100 nm/ NIR: 400 - 2300 nm
Device Connection	Glass Fiber with F-SMA Connector/ Glass Fiber with Collimator (Ø 5mm)
Fiber Length	2 m glass fiber / No glass fiber
Minimum Immersion Depth	10 mm (Ø 3 mm, 4 mm) 22 mm (Ø 6 mm)
Probe Body Length	75 mm (Ø 3 mm) 130 mm (Ø 4 mm) 175 mm (Ø 6 mm)
Temperature	5 °C to 100 °C
Pressure	-1 bar to 6 bar
Scope of Delivery	Immersion probe, manual, certificate of the pressure test, protocol of the transmission test, transport packaging