

Handy Spec

The Portable Tool for Spectral Analyses

HandySpec VIS is a high-quality hand-held device for spectral analysis and performs exact colorimetric measurements in liquids. It allows the direct analysis in the production area without the time consuming procedure of taking samples followed by measurements in the lab.



HandySpec

- **Portable**
- **Compact**
- **Rugged construction**
- **Wide dynamic range**
- **Immediate data evaluation**
- **Memory for 50 spectra**
- **Standard RS-232 interface**

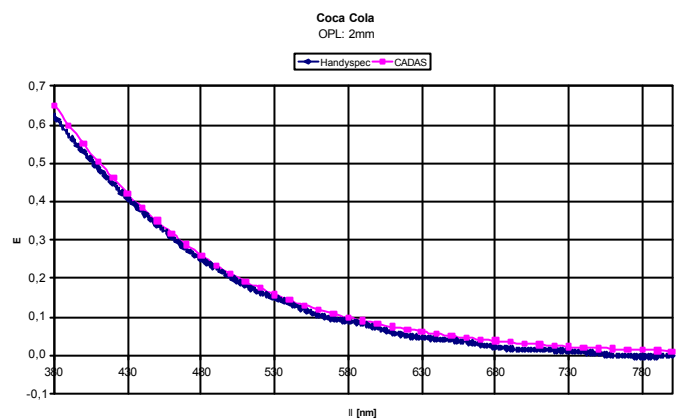
Easy Handling

An integrated Hellma immersion probe is directly immersed into the media to be analysed, the performance of the measurement is activated by one single press of a button. After a second the LCD display shows the colorimetric L^*a^*b values, graphical as well as the complete transmission spectrum.

Rugged Construction

The HandySpec is designed especially for measurement tasks in the field and is outstanding concerning compactness and robustness. It delivers an absolute wavelength read-out accuracy of 0.3 nm with a very high reproducibility over a wide dynamic range.

The current version is designed for performing absorption measurements in liquids in the visible and near NIR range.



Absorbance spectra of Coca-Cola, measured with HandySpecVis and laboratory spectrometer.

Reliable Components

The HandySpec is based on the very reliable spectrometer components from Carl Zeiss like the MMS 1 Spectral Sensor module (with range from 320 to 1100 nm) and the immersion probe from Hellma. The light throughput and the extreme stability of these components together with smart electronics allow precise measurements within parts of a second.

Optimised for low power consumption the HandySpec can perform up to 10,000 measurements in total without recharging. Up to 50 spectra can be stored on the internal memory. The complete spectral data as well as the colorimetric results can be forwarded to a computer via serial interface.



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URL <http://www.spectra.co.jp>

Technical data: HandySpec VIS

Spectral Sensor

Module manufacturer: Carl Zeiss
Spectral range: 360* to 1100 nm
Resolution
(according Rayleigh): 10 nm
Pixel dispersion: 3.3 nm
Number of pixels: 256
Wavelength accuracy: 0.3 nm

* limited by light source

Electronics

Microprocessor: Siemens SAB80C537, 8 Bit
Dynamic range: 14 Bit
Integration time: 14ms (min.)
Measurement time: approx. 300ms
Number of measurements: 10,000
Display: LCD graphical display
50 mm x 27 mm
Memory: 50 spectra

Interfaces

Serial interface in accordance with RS-232 for data export, bidirectional (Sub-D connector)

Connector for charging the batteries

Charging voltage: 12 V_{DC} (wall-outlet power supply)

Operating Elements

1 button to perform the measurement,
4 buttons for additional functions e.g selecting menu,
referencing, numerical indication of data etc.

Immersion Probe

Manufacturer: Hellma
Material: Quartz
Fibers: Suprasil, 600 µm dia
Light path: 10 mm (standard),
2 to 20 mm available

Light Source

Type: Halogen
Power: 2 W

Other measurement probes, light sources, Spectral Sensors on request.

Housing

Dimensions: 275* mm x 70 mm x 60 mm
Weight: 1 kg

* without probe

Software

Integrated software for measurement control,
data reduction, dark current subtraction,
evaluation of transmission and absorption,
calculation of colorimetric data,
data storage and data export

Customer Specific Measurement Systems

For applications in process or production control, tec5 offers the high-end MultiSpec OEM Spectrometer System. In addition, we design solutions matched to customers' demands.



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