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Outstanding variety of methods – for all HACH LANGE tests

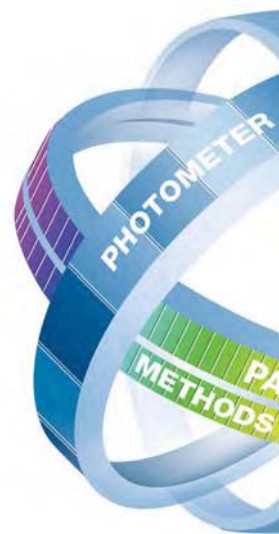
The unique HACH LANGE range of reagents can now be used with the DR 2800 spectrophotometer. All PERMACHEMs, ACCUVACs and cuvette tests are preprogrammed and freely selectable. In addition, the DR 5000 UV-VIS spectrophotometer now covers an even more extensive range of applications, including programmed user methods in the UV range, scans, special drinking water and brewery analysis.

For all HACH LANGE tests: DR 2800 VIS Spectrophotometer – measurements without even pressing a button

Simple and very precise: automatic test identification and outlier elimination

Time-saving and innovative: evaluation in the open cell compartment

Intuitive operation: touchscreen with easily understandable menus



Wastewater

CUVETTE TEST

Results automatically saved



Easy-to-handle innovative and reliable cuvette tests, comparable to reference methods

USB memory stick

PERMACHEM Powder Pillows

50 mm cells

ACCUVAC

1-inch cells

Even more versatile: DR 5000 UV-VIS Spectrophotometer, e.g. for scans and all HACH LANGE tests; freely programmable



Drinking water, cooling water, boiler water

ACCUVAC PERMACHEM

Results saved manually



Automatic sipper module



cm inch

Multi cell holder

DR 2800 VIS: rugged instrument for use in the laboratory and in the field

The DR 2800's reliable optical system ensures accurate results. Each wavelength is freely selectable, and the instrument's memory can accommodate 50 user methods and up to 500 measured values alongside the 200 preprogrammed tests. The variable cell sizes enable readings to be taken across wide measuring ranges, from trace analysis to high concentrations in electroplating baths. Easily understandable menus and the large touchscreen helps prevent errors.

DR 5000 UV-VIS: demanding water analysis in the laboratory

The DR 5000 UV-VIS Spectrophotometer culminates from the experience of the manufacturers HACH and LANGE: high quality optics, fast scans and user friendly operation are essential in any demanding water laboratory. The key benefits include the versatility of the DR 5000. This is reflected in the multi cell holder, the cell modules, the high precision optics and more than 200 factory-installed HACH LANGE methods.

→ For more information about the tests for the DR 2800 and DR 5000 see page 54

→ Technical data: see next page



More information at www.hach-lange.co.uk, www.hach-lange.com, keyword "DR 2800" or "DR 5000", with free downloads of brochures (DR 2800: DOC032.52.00437; DR 5000: DOC032.52.00432) and User Manuals (DR 2800: DOC022.52.00720; DR 5000: DOC022.52.00654)



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Facts and figures about the DR 2800 and DR 5000



DR 5000 UV-VIS Spectrophotometer with high precision optics



Application software for drinking water analysis: LZV571



Application software for brewery analysis conforms with MEBAK, LZV570

Technical data

NEW!

NEW!

	DR 2800 VIS Spectrophotometer	DR 5000 UV-VIS Spectrophotometer with multi cell holder
Article number	LPV422.99.00001	LPV408.99.00001
Reference beam technology	To compensate for lamp ageing and power fluctuations	
Operating modes	Absorbance ($\pm 3A$), transmittance (%), concentration	
Wavelength range	340–900 nm	190–1,100 nm
Wavelength accuracy	± 1.5 nm	± 1 nm at 200–900 nm
Wavelength reproducibility	0.1 nm	0.1 nm
Wavelength resolution	1 nm	0.1 nm
Scan rate	-	900 nm/min in 1 nm steps
Spectral band width	5 nm	2 nm
Photometric accuracy	5 mA at 0.0–0.5 A; 1% at 0.5–2.0 A	
Photometric linearity	< 0.5% at 2 A; 1% at > 2 A	
Stray light	< 0.1% absorbance at 340 nm	< 0.05% absorbance at 340 nm
IBR Integrated Barcode Reader	Automatic identification of LANGE Cuvette Tests, including 10 measurements per rotation for outlier elimination	
Cell holders	Round cuvettes: 1 inch, 13 mm Rectangular cells: 10 mm, 50 mm, 1 inch	Multi cell holder for round Round cuvettes: 30 mm, 1 inch Rectangular cells: 10 mm, 20 mm, 50 mm, 1 inch
Flow-through measurement	Manual flow-through module, without sipper motor (Art. no. 5940400)	Automatic sipper module for flow-through cells (Art. no. LZV485)
Changer	-	Changer module for a maximum of seven rectangular cells, 10 mm (Art. no. A23620)
Cell temperature control	-	Peltier module 15–50 °C, for rectangular cells, 10 mm (Art. no. LZV513)
Display	Backlit, high-resolution LCD (320 x 240 pixel, touchscreen)	
Data storage	500 measured values	1,000 measured values, 20 wavelength scans, 20 time scans
Ports	1 USB port for PC, 1 USB port for printer, keyboard, USB memory stick	1 USB port for PC, 2 USB ports for printer, keyboard, USB memory stick
Protection rating	IP 42	IP 31
Power requirement	100–120 V; 200–240 V; 50/60 Hz; automatic switchover	
Li ion battery	Optional (Art. no. LZV551)	-
Dimensions (H x D x W), weight	13 x 33 x 22 cm, 4.1/4.4 kg without/with battery	20 x 50 x 45 cm; 15.5 kg



For information about additional software, cells, peripherals and other accessories for the DR 2800 and DR 5000 see page 78; complete accessories list in eShop under www.hach-lange.co.uk, www.hach-lange.com, keyword "LPV408" for DR 5000 or "LPV422" for DR 2800

For accurate analysis: XION spectrophotometer

- **Manages and exports data**
- **Variable wavelength scans**
- **Time dependent measurements with auto function**
- **100 LANGE tests available**
- **Same as LICO 400 for measuring the colour of clear liquids**



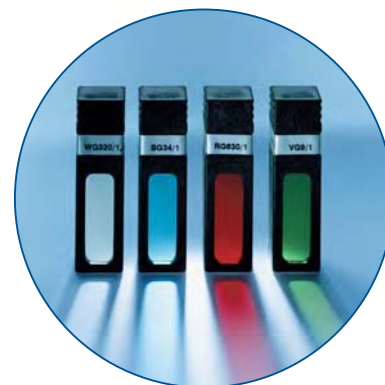
Benefit: working with open cuvette compartment—with XION LOCK IN technology

XION—Data management for water analysis

The database enables the data from 2,500 measurements to be stored and evaluated without a PC. The data can be exported through the serial interface to a PC or LIMS, or can be copied. Thanks to the data handset, the instrument data can be updated at any time by telephone. Automatic outlier elimination ensures maximum reliability in the results of LANGE cuvette tests.

LICO 400—Standard colour determination

With 24 international colour scales, e.g. Hazen (Pt-Co), Gardner, Saybolt and ASTM D 1500, the LICO 400 is the ideal colorimeter. It is suitable for measuring coloured transparent solutions. It also conforms to Pharm. Eur. and US-Pharm. All colour scales are easily readable with one measurement in just one cuvette.



LZV537 test filter kit. Secondary standards for ISO-compliant self-monitoring:
→ See page 80

XION spectrophotometer/LICO 400 colorimeter

Model no.	LPV385 (XION), LMV184 (LICO 400)
Type	Spectrophotometer with reference beam path
Wavelength range	340–900 nm
Wavelength accuracy	± 2 nm
Operating modes	Concentration, absorbance, transmittance
Scan	Wavelength scan, time scan
Zeroing	Automatic
Cuvette compartments	Separate, for LANGE round or rectangular cuvettes up to 10 x 50 mm
Storage	For more than 2,500 measured values; for user methods

LOCK IN technology	To eliminate stray light
Large display	For measured values, graphs and tables
IBR technology*	With tenfold measurement of round cuvettes, including outlier elimination
LANGE cuvette tests*	Completely pre-programmed
LANGE NET*	Integrated data handset for updating data by telephone
Interfaces	1 serial and 1 parallel

* XION spectrophotometer only

→ LANGE tests for XION: see page 54–65,
Accessories: see page 77–82



More information at www.hach-lange.co.uk, www.hach-lange.com, keyword „XION“ or „LICO 400“, with free downloads of brochures (XION: DOC032.52.00007; LICO: DOC032.52.00534) and User Manuals (XION: BDA 447, LICO: DOC022.52.00524)