

**INFORMATION**  
LABORATORY ANALYSIS  
VIS SPECTROPHOTOMETER  
DR3800 SC



# Intelligent water analysis

**DR3800 sc VIS spectrophotometer**



UNITED FOR WATER QUALITY

# Latest in Spectrophotometry technology

With its intelligent water analysis systems, HACH LANGE is known for its technologies and developments in photometers, reagents and accessories. The DR3800 sc VIS spectrophotometer delivers new levels of operation and flexibility, whilst bringing process data into the laboratory for the first time.

- **Direct comparison of process and laboratory measured values with LINK2SC® software**
- **Around 230 methods from screening to officially approved self monitoring**
- **User methods can be programmed easily with the help of intuitive menu guidance**
- **Clear and reliable operation with TFT colour display**



Faster digestion with the HT 200 S high-temperature thermostat saves time.



Certified test filters and simple menu-guided quality assurance in accordance with GLP.



Barcode labelled samples are easily identified by a hand-held scanner, ensuring the correct method is automatically selected.



### TFT COLOUR DISPLAY

The high resolution colour display clearly shows the value in relation to the measuring range and any red characters indicate that the value is not inside the measuring range.

### USB DATA MANAGEMENT

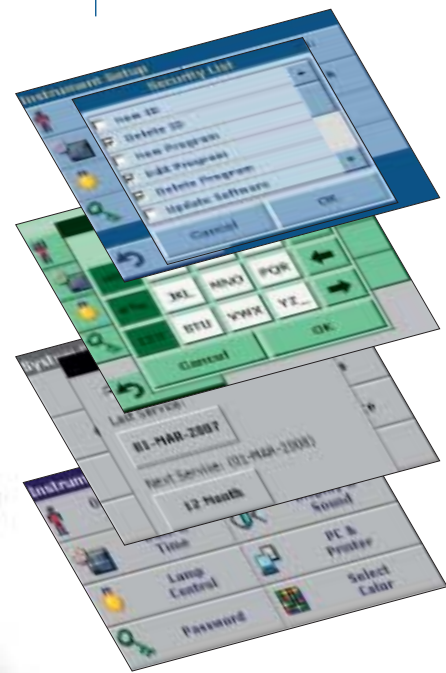
Storage of all data communication is ensured through:

- Data sharing with colleagues via USB
- Automatic data transfer between PC and printer
- Software updates via the Internet

### SECURE AND RELIABLE

Key benefits include:

- Password-protected access and colour-coded user profiles
- Optional service date reminder can help cut costs



USB memory stick: measured values and methods can be easily transferred.



Comprehensive methods and a wide variety of parameters with quality reagents from HACH and LANGE.



### Easy handling

Samples can be measured in the open measurement compartment. The LOCK IN technology eliminates interference. This ensures quick and easy handling in routine daily operations. Round cuvettes can be easily inserted into the cuvette compartment. There is also an easy cleaning measuring compartment and drainage system.

ADDISTA quality assurance system: ensures accurate results.

### INDIVIDUAL USE

50 freely programmable methods can be developed with the help of the intuitive touchscreen. Self-explanatory programming means minimal training time. User methods can be transferred to other DR 3800 sc spectrophotometers via the USB stick.



### APPLIED QUALITY ASSURANCE

Verified measured values for every application thanks to:

- Menu-guided instrument monitoring with certified, traceable test filters
- Switchable working procedures



### PROFESSIONAL SCANS

Wavelengths and time scans are easy to interpret due to:

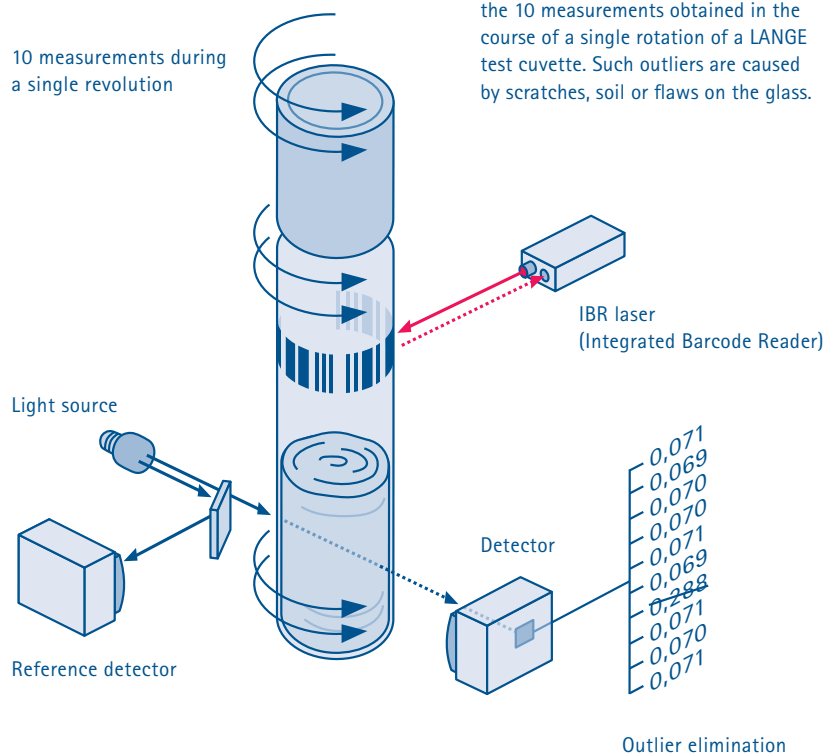
- Distinct colour display of adjacent curves
- Detailed view with zoom and min/max function
- Comparison of 20 storable reference scans



### Flexible water analysis

The DR 3800 sc was developed for a wide range of applications. The working memory has space for 230 pre-programmed and 50 freely programmable methods, 1,000 measured values, 20 wavelength scans and 20 time scans. Wide measuring ranges from trace amounts to high concentrations. After the LANGE test cuvette is inserted, the VIS spectrophotometer automatically performs zeroing and selects the wavelengths and factors. Many sources of error are therefore excluded from the very start, whilst others are excluded by the switchable working procedures and timer. The DR 3800 sc ensures long-term reproducible results with its intelligent photometer technology.

10 measurements during a single revolution

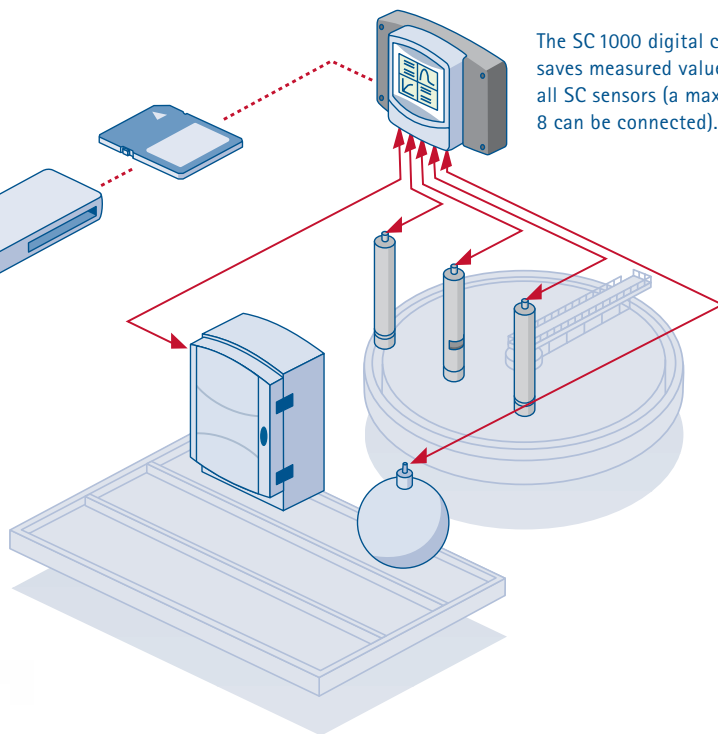


The intelligent DR 3800 sc VIS spectrophotometer automatically recognises and eliminates outliers in the 10 measurements obtained in the course of a single rotation of a LANGE test cuvette. Such outliers are caused by scratches, soil or flaws on the glass.

# LINK2SC® – laboratory and process data at a glance

Quick and practical with USB data transfer. Process measured values can be transferred from the SC 1000 digital controller to the DR3800 sc.

The SC 1000 digital controller saves measured values from all SC sensors (a maximum of 8 can be connected).

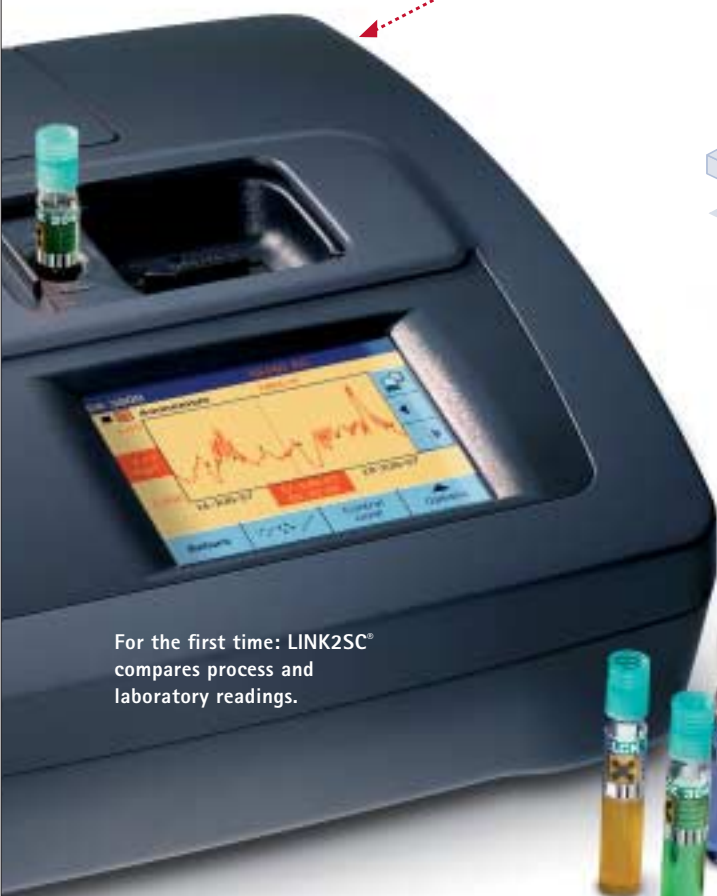


For the first time: LINK2SC® compares process and laboratory readings.

## Visibility of results can cut costs

For the first time, process and laboratory readings can be compared directly in a photometer, thanks to the optional LINK2SC® software. For example, the detailed colour diagram can display the measured values from a 24-hour mixed sample and the corresponding time-course curve on a SC 1000 digital controller. Just one press of a button and all the details are available in a single document. LINK2SC® allows the data to be more transparent. The software can reveal irregularities. This eliminates unnecessary costs caused by a rise in concentration above the maximum value, or the addition of excessive amounts of precipitants.

Reliable measurement results with LANGE cuvette tests: Low user intervention for safe handling.



# Technical data

DR 3800 sc VIS spectrophotometer	Model no. LPG424.99.00001
Wavelength range	320 – 1.100 nm
Spectral width	5 nm
Operating modes	Concentration, absorbance, transmittance, kinetic and spectra in absorbance, %transmittance, multiwavelength measurements
Wavelength accuracy	± 1.5 nm in the range from 340 – 900 nm
Wavelength reproducibility	≤ 0.1 nm
Wavelength resolution	1 nm
Wavelength scan	Scan with 1; 2; 5 nm steps
Scan rate	≥ 12 nm/s in 1 nm steps (46 sec/340 – 900 nm)
Photometric accuracy	5 mAbs at 0.0 – 0.5 Abs; 1 % at 0.5 – 2.0 Abs
Photometric linearity	< 0.5 % to 2 Abs; ≤ 1 % at > 2 Abs
Stray light	< 0.1 %
Beam path	Reference beam technology
Test identification	IBR barcode reading system
Cuvette sizes	13 mm round (LCK/LCW), 10 mm, 50 mm, 1 inch rectangular and round cuvette
Display	Backlit TFT colour display (320 × 240 Pixel), touchscreen
Memory	230 preprogrammed HACH LANGE methods and 50 user-programmed methods, 1,000 measured values, 20 wavelength scans, 20 time scans
Ports	1 USB port for PC, 1 USB port for printer / scanner / keyboard / USB memory stick or adapter
Protection class	IP 32
Power requirement	15 V / 30 VA; plug-in power supply: 100 – 240 V; 50 / 60 Hz
Dimensions, weight	14.4 × 35.9 × 36.8 cm (H × D × W); 6.4 kg
Optional software	– LINK2SC® to analyse process and laboratory readings, art. no. LZV774 – E-Procedure: Assistant for digital working procedures, art. no. LZV760

## HACH LANGE Services



Ordering, information and advice:  
UK: +44 (0)161 872 14 87  
IRL: +353(0)1 460 25 22  
EU: +49 (0)211 52 88-0



Quality assurance, complete with standard solutions, instrument checks and test solutions.



Seminars and workshops:  
Practical and hands on training.



Service packages and extended warranty up to 5 years.



[www.hach-lange.com](http://www.hach-lange.com)  
Up to date and secure, with downloads, information and e-shop.



Regular customer information by post and email.

## HACH LANGE – the specialists for water analysis

### Everything from a single supplier

Whether field or laboratory analysis, samplers or process measurement technology, HACH LANGE stands for the total spectrum of water analysis. From visual methods to comprehensive systems of reagents, measurement technology and accessories.

### For every application

Solutions from HACH LANGE are tailor-made for wastewater, drinking water or process water – for reliable control of operational processes and monitoring of legally prescribed limit values.

### Parameters from A to Z

From Ammonium to Zinc – consistently user friendly and proven in daily practice. Regulatory bodies and industry know they can rely on HACH LANGE solutions for everything from sample preparation to quality control.

HACH LANGE GMBH  
Willstätterstraße 11  
D-40549 Düsseldorf  
Tel. +49 (0)2 11 52 88-0  
Fax +49 (0)2 11 52 88-143  
info@hach-lange.de  
www.hach-lange.com

HACH LANGE LTD  
Pacific Way  
Salford  
GB-Manchester, M50 1DL  
Tel. +44 (0)161 872 1487  
Fax +44 (0)161 848 73 24  
info@hach-lange.co.uk  
www.hach-lange.co.uk

HACH LANGE LTD  
Unit 1, Chestnut Road  
Western Industrial Estate  
IRL-Dublin 12  
Tel. +353(0)1 460 25 22  
Fax +353(0)1 450 93 37  
info@hach-lange.ie  
www.hach-lange.ie

