



DR6000 Laboratory UV-VIS Spectrophotometer

Applications

- Wastewater
- Drinking Water
- Ground Water / Raw Surface Water
- Industrial
- Food and Beverage
- Power Generation
- Metal and Mining
- Pharmaceutical
- Oil & Gas



Experience Superior Performance with the DR6000 UV-VIS Spectrophotometer, the industry's most advanced lab spectrophotometer

The DR6000 is the industry's most advanced lab spectrophotometer. It offers high-speed wavelength scanning across the UV and Visible Spectrum, and comes with over 250 pre-programmed methods including the most common testing methods used today. With optional accessories allowing for high-volume testing via a carousel sample changer, and increased accuracy with a sample delivery system that eliminates optical difference errors, this instrument ensures you are ready to handle your wide-ranging water testing needs.

Your Water Testing Needs, All in One Spectrophotometer

The DR6000 has the most pre-programmed testing methods, including high-speed wavelength scanning across the UV and Visible Spectrum.

Built for High Volume and Exceptional Accuracy

A carousel sample changer allows up to seven sequential measurements. The Sipper Module, an instrument-controlled sample delivery system, increases precision by constant optical characteristics.

Advanced Quality Assurance at Your Fingertips

The DR6000 comes with integrated QA software for scheduling, documenting and interpreting all of your needed quality measurements.

Guided Procedures and Elimination of False Readings

The DR6000, when used with LCK cuvette tests, provides the accurate results you need by guiding you step-by-step through your testing procedures. With LCK cuvette tests, the instrument averages 10 readings and eliminates outliers, making scratched, flawed or dirty glassware a non-issue.

Automatically Avoids Errors

RFID* technology automatically updates the program calibration factors when you place the LCK reagent box near the DR6000. The instrument identifies chemistry expiration dates via a barcode on the vials, and detects chemistry coefficient factors to avoid errors that can occur in lot-to-lot variations in the chemistry.

*RFID technology available in all EU countries plus e.g. UK, Norway, Switzerland, Serbia, Macedonia, Turkey, Russia et al. For other countries please ask your local Hach contact person.

Technical Data*

Operating mode	Transmittance (%), Absorbance and Concentration, Scanning
Source lamp	Tungsten (VIS), Deuterium lamp (UV)
Optical system	Reference beam, spectral
Wavelength range	190 - 1100 nm
Wavelength accuracy	± 1 nm
Wavelength reproducibility	< 0.1 nm
Wavelength resolution	0.1 nm
Wavelength selection	Automatic
Spectral Bandwidth	2 nm
Scanning speed	900 nm/min (in 1 nm steps)
Photometric measuring range	± 3 Abs (wavelength range 340 - 900 nm)
Photometric accuracy	5 mAbs @ 0.0 - 0.5 Abs
Photometric linearity	< 0.5 % - 2 Abs
Stray light	KI-solution at 220 nm < 3.3 Abs
Display	7" TFT WVGA colour touchscreen
Data storage	5000 measured values (Result, Date, Time, Sample ID, Operator ID)

Pre-programmed methods	> 240
User programmes	200
Cuvette compatibility	Rectangular: 10, 20, 30, 50 mm, 1 inch; round: 13 mm, 1 inch Optional 100 mm rectangular cell with additional adapter
Dimensions (H x W x D)	215 mm x 500 mm x 460 mm
Weight	11 kg
Operating conditions	10 - 40 °C , max. 80% relative humidity (not condensing)
Storage conditions	-25 °C - 60 °C , max. 80% relative humidity (non-condensing)
Enclosure waterproof rating	IP20 with closed lid
Power requirements (Voltage)	110 - 240 V AC
Power requirements (Hz)	50/60 Hz
Interfaces	USB type A (2), USB type B, Ethernet, RFID module

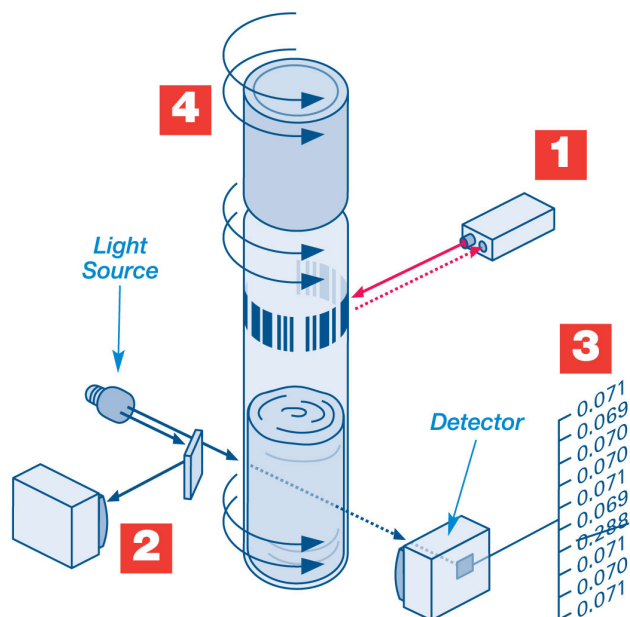
*Subject to change without notice.

Principle of Operation

Hach LCK cuvette tests and spectrophotometers are made to work seamlessly with each other.

A unique barcode label on each LCK cuvette test is automatically read by the DR6000 spectrophotometer to identify the appropriate method and take the measurement. This significantly reduces errors as well as scratched, flawed or dirty glassware becomes non-issue as the instrument averages 10 readings and rejects outliers.

The barcode details batch number and expiry date of reagents, which are documented along with the measurement result. An automatic warning is issued if expiry date has passed. Batch specific information (COA) is available on RFID tag on the box, which can be read out with the DR6000 instrument.



How LCK works

1 - Barcode Recognition

Simply drop in the cuvette and get results immediately with automatic method detection.

2 - Reference Detector

Monitors and compensates for optical fluctuations.

3 - 10 fold Measurement and Outlier Elimination

Dirty, scratched, or flawed glassware, incl. fingerprints, is no longer an issue as the instrument averages 10 readings and rejects outliers.

4 - Dosiscap - reagents inside cuvette cap

No risk of spillage, no safety risk, or risk of contamination with Dosiscaps because the reagents are completely contained within the cuvette cap.

Parameter Overview*

The following table lists available tests and overall ranges for the DR6000 Benchtop Spectrophotometer. The ranges may represent more than one available test for the instrument. Visit uk.hach.com or consult your Hach representative or Customer Service for complete details of all available tests for this instrument.

Parameter	Range	LCK Test	Parameter	Range	LCK Test
Acid Capacity	0.5 - 8.0 mmol/L	•	Mercury	0.1 - 2.5 µg/L Hg	
Alcohol	0.01 - 0.12 g/L	•	Methylethylketoxime	15 - 1000 µg/L	
Aluminium	0.002 - 0.8 mg/L Al	•	Molybdenum, Molybdate	0.02 - 300 mg/L	•
Ammonium	0.005 - 1800 mg/L NH ₄ -N	•	Nickel	0.006 - 6.0 mg/L Ni	•
Anammox Activity	0 - 1000 mAbs	•	Nitrate	0.23 - 150 mg/L NO ₃ -N	•
AOX	0.05 - 3.0 mg/L AOX	•	Nitrite	0.0015 - 90 mg/L NO ₂ -N	•
Arsenic	0.020 - 0.200 mg/L As		Nitrogen, Total	1 - 250 mg/L	•
Atrazine	0.1, 0.5, 3.0 ppb thresholds		Nitrogen, Total Kjeldahl	1 - 150 mg/L	
Barium	2 - 100 mg/L Ba		Organic Acids	50 - 2500 mg/L	•
Benzotriazole	1.0 - 16.0 mg/L		Ozone	0.01 - 2.0 mg/L O ₃	•
Bitter Units	≥ 2 BU	•	PCP (Polychlorinated Biphenyls)	1, 5, 10, 50 ppm thresholds	
BOD (Biological Oxygen Demand)	0.5 - 1650 mg/L O ₂	•	Permanganate Index	0.5 - 10 mg/L O ₂	•
Boron	0.05 - 14 mg/L B	•	Phenols	0.002 - 150 mg/L	•
Bromine	0.05 - 4.50 mg/L Br		Phosphate, Ortho	0.01 - 30.0 mg/L PO ₄ -P	•
Cadmium	0.02 - 0.30 mg/L Cd	•	Phosphate, Ortho + Total	0.01 - 20.0 mg/L PO ₄ -P	•
Carbohydrazide	5 - 600 µg/L		Phosphonates	0.02 - 125.0 mg/L	
Carbon Dioxide	55 - 550 mg/L CO ₂	•	Potassium	0.1 - 50 mg/L K	•
Chloramine, Mono	0.04 - 4.5 mg/L		Quaternary Ammonium Compounds	0.2 - 5.0 mg/L	
Chloride	0.1 - 1000 mg/L Cl-	•	Selenium	0.01 - 1.00 mg/L	
Chlorine, Free	0.02 - 10.0 mg/L	•	Silica	3 µg/L - 100 mg/L SiO ₂	
Chlorine, Total	2 µg/L - 10.0 mg/L	•	Silver	0.02 - 400 mg/L Ag	•
Chlorine Dioxide	0.01 - 1000 mg/L ClO ₂		Sulphate	2 - 900 mg/L SO ₄ ²⁻	•
Chromium, Hexavalent + Total	0.005 - 1.00 mg/L	•	Sulphide	0.005 - 2.0 mg/L S ²⁻	•
Cobalt	0.01 - 2.00 mg/L Co		Sulphite	0.1 - 5.0 mg/L SO ₃ ²⁻	•
COD (Chemical Oxygen Demand)	0 - 60000 mg/L O ₂	•	Surfactants, Anionic	0.002 - 4.0 mg/L	•
Colour	3 - 500 units		Surfactants, Cationic	0.2 - 2.0 mg/L	•
Copper	0.001 - 8.0 mg/L Cu	•	Surfactants, Nonionic	0.2 - 200 mg/L as Triton x 100	•
Cyanide	0.002 - 0.6 mg/L CN	•	Surfactants, Nonionic	0.1 - 20 g/L	•
Cyanuric Acid	5 - 50 mg/L		Suspended Solids	5 - 750 mg/L	
DEHA (Diethylhydroxylamine)	3 - 450 µg/L		Tannin and Lignin	0.1 - 9.0 mg/L	
Dissolved Oxygen	6 µg/L - 40 mg/L		Tin	0.1 - 2 mg/L Sn	•
Erythorbic Acid	13 - 1500 µg/L		TOC (Total Organic Carbon)	2 - 3000 mg/L C	•
Fluoride	0.02 - 2.5 mg/L F	•	Tolytriazole	1.0 - 20.0 mg/L	
Formaldehyde	0.003 - 10 mg/L H ₂ CO	•	TPH (Total Petroleum Hydrocarbons)	2 - 200 ppm, threshold	
Hardness	0.004 - 4 mg/L as CaCO ₃ 0.02 - 20 °dH	•	Trihalomethane	10 - 600 µg/L	
Hydrazine	4 - 600 µg/L		Vicinale Diketones	0.015 - 0.5 mg/kg Diacetyl	•
Hydroquinone	9 - 1000 µg/L		Volatile Acids	27 - 2800 mg/L	•
Iodine	0.07 - 7.00 mg/L I ₂		Zinc	0.01 - 6.0 mg/L Zn	•
Iron, Dissolved + Total	0.009 - 6.0 mg/L Fe	•	Zirconium	6 - 60 mg/L Zr	•
Lead	0.003 - 2.0 mg/L Pb	•			
Magnesium	0.5 - 50 mg/L Mg	•			
Manganese	0.005 - 20 mg/L Mn				
Menthol	0.5 - 15 mg/L Menthol/100 mL Destillate				

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Order Information

DR6000 UV-VIS Spectrophotometer includes a multi adapter for round and rectangular vials, basic user manual, CD with manual and procedure manual in PDF format. Power cords for US and EU. RFID version available only in a limited number of countries. For complete information please visit uk.hach.com or contact Hach.

- LPV441.99.00011** DR6000 UV-VIS Spectrophotometer with RFID Technology
LPV441.99.00001 DR6000 UV-VIS Spectrophotometer without RFID Technology

Accessories

- LQV157.99.20001** SIP10 Sipper set for DR6000 with 1 inch round cell
LQV156.99.10011 LOC100 RFID set for sample identification
LZV902.99.00001 Carousel holder 1 cm for DR6000
LZV902.99.00011 Carousel holder 1 inch for DR6000
LZV943 Application Software Enzymatic Food Analysis
LZV942 Application Software Brewery Analysis
LZV941 Application Software Drinking Water Analysis for DR6000 Spectrophotometer

Hach Service Protects Your Investment

With Hach Service, you have a global partner who understands your needs and cares about delivering timely, high-quality service you can trust. Our Service Team brings unique expertise to help you maximise instrument uptime, ensure data integrity, maintain operational stability, and reduce compliance risk.

