

DR 6000™ UV-Vis Spectrophotometer

Applications

- Beverage
- Drinking Water
- Industrial Water
- Pharmaceutical
- Power
- Wastewater



The industry's most advanced lab spectrophotometer.

With UV and Visible Spectrum capabilities, over 250 pre-programmed methods including the most common testing methods used, guided procedures, and integrated quality assurance software, the DR 6000 ensures you are ready to handle your comprehensive water testing needs.

Your Water Testing Needs, All in One Spectrophotometer

The DR 6000 has the most pre-programmed testing methods, including high speed wavelength scanning across the UV and Visible Spectrum.

Accessories for High Volume and High Accuracy Testing Needs

A carousel sample changer allows for 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 DR 6000 comes with integrated QA software for scheduling, documenting and interpreting all of your needed quality measurements.

Guided Procedures and Elimination of False Readings

The DR 6000, when used with TNTplus® reagent vials provides you the accurate results you need by guiding you step-by-step through your testing procedures. With TNTplus the instrument averages 10 readings and eliminating outliers, making scratched, flawed or dirty glassware a non-issue.

Automatically Avoids Errors

RFID* technology automatically updates the program calibration factors when you place a TNTplus reagent box near the DR 6000. 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 currently available in US, Canada, Australia and New Zealand only.



Be Right™

Specifications*

Operating Mode	Transmittance (%), absorbance and concentration (wavelength, time)
Source Lamp	Tungsten (visible range), deuterium (UV range)
Wavelength Range	190 - 1100 nm
Wavelength Accuracy	±1 nm
Wavelength Reproducibility	< 0.1 nm
Wavelength Resolution	0.1 nm
Wavelength Selection	Automatic, based on method selection
Spectral Bandwidth	2 nm
Photometric Measuring Range	±3 Abs
Photometric Accuracy	<1% at 0.5-2.0 Abs at 546 nm 5 mAbs at 0.0-0.5 Abs
Scanning Speed	900 nm/min (in 1 nm steps)
Photometric Linearity	0.5% - 2 Abs ≤1% at > 2 Abs with neutral glass at 546 nm
Stray Light	KI-solution at 220 nm < 3.3 Abs/ < 0.05%
Display	TFT 7 inch WVGA color touch

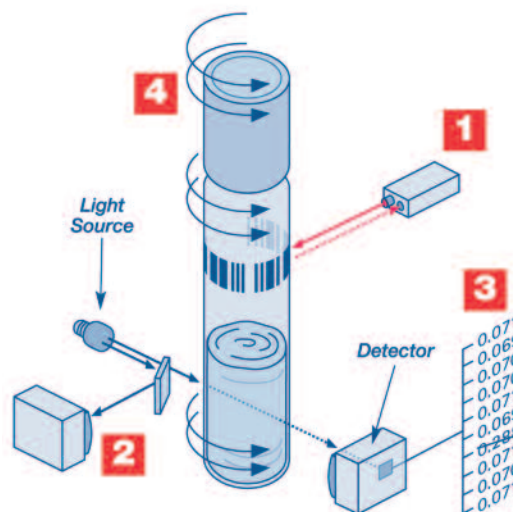
Data Logger	5000 data points (result, date, time, sample-ID, user-ID)
Preprogrammed Methods	>250
User Programs	200
Sample Cell Compatibility	Rectangular: 10, 20, 30, 50 mm, 1 inch; round: 13 mm, 16 mm, 1 inch Optional 100 mm rectangular cell with additional adapter
Dimensions Metric (H x W x D)	8.5 in x 19.7 in x 18.1 in (215 mm x 500 mm x 460 mm)
Weight	24.25 lbs. (11 kg)
Operating Conditions	10 to 40°C, max. 80% relative humidity (non-condensing)
Storage Conditions	-25 to 60°C max. 80% relative humidity (non-condensing)
Instrument Enclosure Rating	IP 20 with closed lid
Interfaces	USB type A (2), USB type B, Ethernet, RFID module
Warranty	1 year

*Subject to change without notice.

Principle of Operation

Hach's TNTplus chemistries and spectrophotometers are made to work seamlessly with each other.

- Many of the tests are EPA compliant.
- Over 35 tests available including these popular EPA Approved Parameters:
 - Ammonia
 - COD
 - Chlorine
 - Chromium
 - Iron
 - Nitrate
 - Nitrite
 - Nitrogen
 - Phosphorus
 - Sulfate



How TNTplus Works

- 1 Barcode Recognition**
Simply drop in the vial and get results immediately with automatic method detection.
- 2 Reference Detector**
Monitors and compensates for optical fluctuations.
- 3 10X Measurement and Outlier Elimination**
Dirty, scratched, or flawed glassware, including fingerprints, is no longer an issue—instrument averages 10 readings and rejects outliers.
- 4 Self-Contained Packaging—Reagents Inside Sealed Cap**
Reduces exposure to chemicals—no need to open pillows or clean glassware.

See our TNTplus video at: www.hach.com/tntplus

Available Tests

The following table lists available tests and overall ranges for the Hach DR 6000 Benchtop Spectrophotometer. The ranges may represent more than one available test for the instrument. Consult your Hach representative, Customer Service, the Hach Master Catalog, or the Hach web site at www.hach.com for complete details of all available tests for this instrument.

Parameter	Range	TNTplus Test	Parameter	Range	TNTplus Test
Alachlor	0.1 to 0.5 ppb, threshold		Lead	3 µg/L to 2.0 mg/L	•
Alkalinity, Total	25 to 400 mg/L	•	Manganese	0.006 to 20.0 mg/L	
Aluminum	0.002 to 0.800 mg/L	•	Mercury	0.1 to 2.5 µg/L	
Ammonia, Nitrogen	0.015 to 50.0 mg/L	•	Methylethylketoxime (MEKO)	15 to 1000 µg/L	
Arsenic	0.020 to 0.200 mg/L		Molybdenum, Molybdate	0.02 to 40.0 mg/L	
Atrazine	0.5 to 3.0 ppb, threshold		Nickel	0.006 to 6.0 mg/L	•
Barium	2 to 100 mg/L		Nitrate, Nitrogen	0.01 to 35 mg/L	•
Benzotriazole	0.2 to 16.0 mg/L		Nitrite, Nitrogen	0.002 to 250 mg/L	•
Boron	0.2 to 14.0 mg/L		Nitrogen, Simplified Total Kjeldahl	0 to 16 mg/L	•
Bromine	0.05 to 4.50 mg/L		Nitrogen, Total	0.5 to 150 mg/L	•
Cadmium	1.3 µg/L to 0.30 mg/L	•	Nitrogen, Total Inorganic	0.2 to 25.0 mg/L	
Carbohydrazide	5 to 600 µg/L		Nitrogen, Total Kjeldahl	1 to 150 mg/L	
Chloramine, Mono	0.04 to 10.0 mg/L		Ozone	0.01 to 1.50 mg/L	
Chloride	0.1 to 25.0 mg/L		PCB (Polychlorinated Biphenyls)	1 to 50 ppm, threshold	
Chlorine Dioxide	0.01 to 1000 mg/L		Phenols	0.002 to 0.200 mg/L	
Chlorine, Free	0.02 to 10.0 mg/L	•	Phosphonates	0.02 to 125.0 mg/L	
Chlorine, Total	2 µg/L to 10.0 mg/L	•	Phosphorus, Acid Hydrolyzable	0.06 to 100.0 mg/L	
Chromium, Hexavalent	0.010 to 1.00 mg/L	•	Phosphorus, Reactive (Orthophosphate)	19 µg/L to 100.0 mg/L	•
Chromium, Total	0.01 to 0.70 mg/L	•	Phosphorus, Total	0.06 to 100.0 mg/L	•
Cobalt	0.01 to 2.00 mg/L		Potassium	0.1 to 7.0 mg/L	
Color	3 to 500 units		Quaternary Ammonium Compounds	0.2 to 5.0 mg/L	
COD (Chemical Oxygen Demand)	0.7 to 15,000 mg/L	•	Selenium	0.01 to 1.00 mg/L	
Copper	1 µg/L to 8.0 mg/L	•	Silica	3 µg/L to 100 mg/L	
Cyanide	0.002 to 0.240 mg/L		Silver	0.005 to 0.700 mg/L	
Cyanuric Acid	5 to 50 mg/L		Sulfate	2 to 900 mg/L	•
DEHA (Diethylhydroxylamine)	3 to 450 µg/L		Sulfide	5 to 800 µg/L	
Dissolved Oxygen	6 µg/L to 40 mg/L		Surfactants, Anionic	0.002 to 0.275 mg/L	
Erythorbic Acid (Isoascorbic acid)	13 to 1500 µg/L		Suspended Solids	5 to 750 mg/L	
Fluoride	0.02 to 2.00 mg/L		Tannin and Lignin	0.1 to 9.0 mg/L	
Formaldehyde	2 to 500 µg/L		TOC (Total Organic Carbon)	0.3 to 700 mg/L	
Hardness, Total (Calcium and Magnesium as CaCO₃)	4 µg/L to 4.00 mg/L		Tolyltriazole	1.0 to 20.0 mg/L	
Hydrazine	4 to 600 µg/L		Toxicity	0 to 100% Inhibition	
Hydroquinone	9 to 1000 µg/L		TTHM (Trihalomethanes, Total)	10 to 600 µg/L	
Iodine	0.07 to 7.00 mg/L		TPH (Total Petroleum Hydrocarbons)	2 to 200 ppm, threshold	
Iron, Ferrous	0.02 to 3.00 mg/L		Volatile Acids	27 to 2800 mg/L	•
Iron, Total	0.009 to 6.0 mg/L	•	Zinc	0.01 to 3.00 mg/L	

Ordering Information

DR 6000 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 in US, Canada, Australia and New Zealand.

- LPV441.99.00012** DR 6000™ UV VIS Spectrophotometer with RFID Technology
LPV441.99.00002 DR 6000 UV VIS Spectrophotometer without RFID

Accessories

- LQV157.99.20002** SIP 10, sipper set for pour thru methods, 1 inch vial
LQV156.99.10002 LOC 100: Kit for Radio Frequency ID (RFID) based sample tracking
LZV902.99.00002 Carousel holder 7x1 cm
LZV902.99.00012 Carousel holder 5x1 inch
LZV943 Application software enzymatic food analysis
LZV942 Application software brewery analysis
LZV941 Application software drinking water analysis



Service Options

Comprehensive warranty upgrade includes: All parts, labor, and shipping costs from the factory for depot repairs. 1 calibration per year on-site, factory recommended maintenance (including required parts), unlimited technical support calls. Also includes a loaner* while waiting for your factory repair. Please see service terms and conditions for additional details on our service plans, and to ensure you have an opportunity to review our environmental and safety requirements.

**Based on availability*

- WRTUPGDR6000** WarrantyPlus™ DR 6000 Spectrophotometer 1 Visit

Comprehensive warranty upgrade includes: All parts, labor, and shipping costs from the factory for depot repairs. 1 calibration per year on-site, factory recommended maintenance (including required parts), unlimited technical support calls. Also includes a loaner* while waiting for your factory repair. Payments for services will be automatically deducted quarterly via credit card. This Evergreen service plan continues indefinitely until either the customer or Hach provides a 90 day written notice to terminate. Upon receiving Buyer's written notice of termination, the effective date will be 90 days after the following quarterly billing period. Prices may be adjusted with a 30 day written notice. Please see service terms and conditions for additional details on our service plans, and to ensure you have an opportunity to review our environmental and safety requirements.

**Based on availability*

- WRTUPGEVERDR6000** WarrantyPlus™ DR 6000 Spectrophotometer 1 Visit
 - Automatic Quarterly Payment Plan (Evergreen)

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