



DR4900 Spectrophotometer

Applications

- Beverage
- Drinking Water
- Wastewater
- Food QC Lab
- Power Generation



Bringing Effortless Accuracy to Your Lab

Simplify and modernize your lab's workflow, reduce errors, and stay compliant with confidence. Designed for lab professionals who demand accuracy and efficiency, this next-generation spectrophotometer improves upon the trusted DR3900 by delivering maximum usability and minimal wasted time.

Backed by decades of expertise and responsive support, the DR4900 from Hach is engineered to meet the evolving demands of modern water analysis. It's everything users love about existing Hach spectrophotometers—refined and reimaged for today's demanding workflows.

Proven Technology, Modern Interface

The DR4900 Spectrophotometer maintains the trusted core of the DR3900, now enhanced with a 10" screen and modern user interface that helps reduce training time and speed up routine workflows. It's the familiar performance lab professionals trust, elevated for modern needs.

Ensuring Reliable Results with Unrivaled Diagnostic Features

Temperature and turbidity diagnostics help prevent common testing errors -- reducing rework and ensuring consistent accuracy. When using Hach TNTplus vial tests, the DR4900 automatically checks the temperature and turbidity of your test, providing you with alerts when out of range, giving you the confidence you need in every measurement.

Complete Confidence - From Start to Finish

DR4900 users benefit from end-to-end expertise across instruments, chemistries, and service. So you get faster resolutions, deeper insights, and consistent results from a single partner.

DR4900 options to fit your workflow

Two versions of the DR4900 are available: one without an external camera (LPV451.99.00021) or with an external camera (LPV451.99.00121) to enable Smart Workflow features including Certificate of Analysis QR code scanning and Sample ID Text Recognition.

- **Without Camera (LPV451.99.00021)**

Delivers the full DR4900 analytical performance and error prevention features for routine lab workflows

- **With Camera (LPV451.99.00121)**

Includes all DR4900 performance features plus an external camera that enables Smart Workflow capabilities such as Certificate of Analysis QR code scanning and Sample ID Text Recognition - reducing manual data entry and supporting documentation tracking directly at the instrument.

Technical Data*

Operating Mode	Transmittance (%), absorbance (Abs) or concentration
Light Source	Halogen lamp
Optical System	Reference beam, spectral
Wavelength Range	320 - 1100 nm
Wavelength Accuracy	± 1.5 nm (wavelength range 320 - 1100 nm)
Wavelength Reproducibility	± 0.1 nm
Wavelength Resolution	1 nm
Wavelength Calibration	Automatic
Spectral Bandwidth	5 nm
Photometric Measuring Range	±3.0 Abs (340 - 900 nm)
Photometric Accuracy	5 mAbs at 0.0 - 0.5 Abs 1% at 0.50 - 2.0 Abs
Photometric Linearity	< 0.5% - 2 Abs ≤ 1% at > 2 Abs with neutral glass at 546 nm
Stray Light	< 0.1% T at 340 nm with NaNO ₂
Display	10 inch (25.4 cm)
Data Logger	> 10,000 measured values (measured values, date, time, sample ID, user ID)
Preprogrammed Methods	> 240
User Programs	> 100 user programs

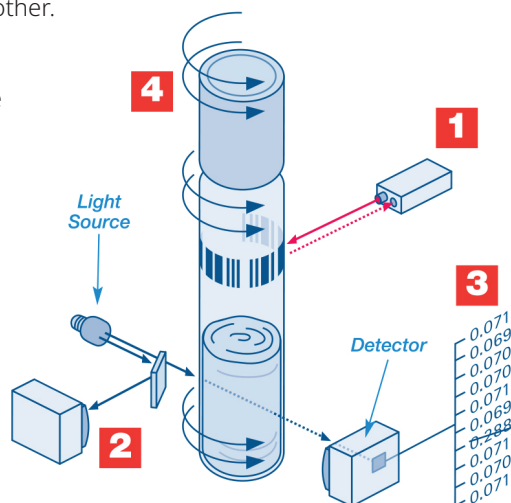
Sample Cell Compatibility	Rectangular: 10 mm, 50 mm, 1 inch Round: 13 mm, 16 mm, 1 inch
Dimensions (H x W x D)	226 mm x 255 mm x 344 mm
Weight	4.8 kg (10.58 lb)
Operating Conditions	50 - 104 °F (10 - 40 °C), maximum 80% relative humidity, non-condensing
Storage Conditions	-40 - 140 °F (-40 - 60 °C), maximum 80% relative humidity, non-condensing
Enclosure Rating	IP20
Power Supply	Benchtop Power Supply
Power Requirements (Voltage)	100 - 240 VAC
Power Requirements (Hz)	50/60 Hz
Interfaces	Use only shielded cable with maximum length of 3 m (9.8 ft) for: USB type A and type C (front side) USB type A and type C (back side) Use only shielded cable (e.g., STP, FTP, S/FTP) with maximum length of 20 m (65.6 ft) for: 1x Ethernet
Warranty	12 months

*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.

Available Tests

The following table lists available tests and overall ranges for the Hach DR4900 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	EPA
Alachlor	0.1, 0.5 ppb thresholds		
Alkalinity, Total	25 - 400 mg/L	•	
Aluminum	0.002 - 0.800 mg/L	•	
Ammonia, Nitrogen	0.015 - 50.0 mg/L	•	•
Arsenic	0.020 - 0.200 mg/L		•
Atrazine	0.1, 0.5, 3.0 ppb thresholds		
Barium	2 - 100 mg/L		
Benzotriazole	1.0 - 16.0 mg/L		
Boron	0.2 - 14.0 mg/L		
Bromine	0.05 - 4.50 mg/L		
Cadmium	7 µg/L - 0.30 mg/L	•	
Chloramine, Mono	0.04 - 10.0 mg/L		
Chloride	0.1 - 25.0 mg/L		
Chlorine Dioxide	0.01 - 1000 mg/L		
Chlorine, Free	0.02 - 10.0 mg/L	•	•
Chlorine, Total	2 µg/L - 10.0 mg/L	•	•
Chromium, Hexavalent	0.010 - 1.00 mg/L	•	•
Chromium, Total	0.01 - 0.70 mg/L	•	
Cobalt	0.01 - 2.00 mg/L		
Color	3 - 500 units		
COD (Chemical Oxygen Demand)	0.7 - 15,000 mg/L	•	•
Copper	1 µg/L - 8.0 mg/L	•	•
Cyanide	0.002 - 0.240 mg/L		
Cyanuric Acid	5 - 50 mg/L		
DEHA (Diethylhydroxylamine)	3 - 450 µg/L		
Dissolved Oxygen	6 µg/L - 40 mg/L		
Erythorbic Acid	13 - 1500 µg/L		
Fluoride	0.02 - 2.00 mg/L		•
Formaldehyde	3 - 500 µg/L		
Hardness, Total (Calcium & Magnesium as CaCO₃)	4 µg/L - 4.00 mg/L		
Hydrazine	4 - 600 µg/L		
Hydroquinone	9 - 1000 µg/L		
Iodine	0.07 - 7.00 mg/L		
Iron, Ferrous	0.02 - 3.00 mg/L		
Iron, Total	0.009 - 6.0 mg/L	•	•
Lead	3 µg/L - 2.0 mg/L	•	
Manganese	0.006 - 20.0 mg/L		•

Parameter	Range	TNTplus Test	EPA
Mercury	0.1 - 2.5 µg/L		
Methylethylketoxime	15 - 1000 µg/L		
Molybdenum, Molybdate	0.02 - 40 mg/L		
Nickel	0.006 - 6.0 mg/L	•	
Nitrate, Nitrogen	0.01 - 35 mg/L	•	•
Nitrite, Nitrogen	0.002 - 250 mg/L	•	•
Nitrogen, Simplified Total Kjeldahl	0 - 16 mg/L	•	•
Nitrogen, Total	0.5 - 150 mg/L	•	
Nitrogen, Total Inorganic	0.2 - 25.0 mg/L		
Nitrogen, Total Kjeldahl	1 - 150 mg/L		
Ozone	0.01 - 1.50 mg/L		
PCP (Polychlorinated Biphenyls)	1, 5, 10, 50 ppm thresholds		
Phenols	0.002 - 150 mg/L	•	•
Phosphonates	0.02 - 125.0 mg/L		
Phosphorus, Acid Hydrolyzable	0.06 - 100.0 mg/L		
Phosphorus, Reactive (Ortho)	19 µg/L - 100.0 mg/L	•	•
Phosphorus, Total	0.06 - 100.0 mg/L	•	•
Potassium	0.1 - 7.0 mg/L		
Quaternary Ammonium Compounds	0.2 - 5.0 mg/L		
Selenium	0.01 - 1.00 mg/L		
Silica	3 µg/L - 100 mg/L		
Silver	0.005 - 0.700 mg/L		
Sulfate	2 - 900 mg/L	•	•
Sulfide	5 - 800 µg/L		•
Surfactants, Anionic	0.002 - 0.275 mg/L		
Suspended Solids	5 - 750 mg/L		
Tannin and Lignin	0.1 - 9.0 mg/L		
TOC (Total Organic Carbon)	0.3 - 700 mg/L	•	
Tolytriazole	1.0 - 20.0 mg/L		
Toxicity	0 - 100% Inhibition		
Trihalomethane	10 - 600 µg/L		
TPH (Total Petroleum Hydrocarbons)	2 - 200 ppm, threshold		
Volatile Acids	27 - 2800 mg/L	•	
Zinc	0.01 - 3.00 mg/L		•

Special Features

Parameter	Part Number	Temperature Compensation	Temperature Warning	Turbidity Warning
Nitrogen, Total	TNT826		•	
	TNT827		•	
	TNT828		•	
Nitrate, Nitrogen	TNT835		•	
	TNT836		•	
Ammonia, Nitrogen	TNT832	•	•	
	TNT830	•	•	
	TNT831	•	•	
COD (Chemical Oxygen Demand)	TNT823		•	•
	TNT821		•	•
	TNT820		•	•
	TNT815		•	•
	TNT824		•	•

Order Information

- LPV451.99.00021** DR4900 Laboratory Spectrophotometer, without camera
LPV451.99.00121 DR4900 Laboratory Spectrophotometer, with camera

Accessories

- LZV537** Test Filter Set for DR Spectrophotometers
LZV873 Ethernet cable



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 maximize instrument uptime, ensure data integrity, maintain operational stability, and reduce compliance risk.



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In the interest of improving and updating its equipment, Hach Company reserves the right to alter specifications to equipment at any time.

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