DR4900 Spectrophotometer

Applications

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

Bringing Effortless Accuracy to Your Lab

Simplify and modernise 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 reimagined 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 LCK cuvette 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 (LPV451.99.00011) or with an external camera (LPV451.99.00111) to enable Smart Workflow features including Certificate of Analysis QR code scanning and Sample ID Text Recognition.

- **Without Camera (LPV451.99.00011)**
  Delivers the full DR4900 analytical performance and error prevention features for routine lab workflows
- **With Camera (LPV451.99.00111)**
  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	25.4 cm
Data storage	> 10,000 measured values (measured values, date, time, sample ID, user ID)
Pre-programmed methods	> 240
User programmes	> 100 user programs

Cuvette compatibility	Rectangular: 10 mm, 50 mm, 1 inch Round: 13 mm, 1 inch
Dimensions (H x W x D)	226 mm x 255 mm x 344 mm
Weight	4.8 kg
Operating conditions	10 - 40 °C, maximum 80% relative humidity, non-condensing
Storage conditions	-40 - 60 °C, maximum 80% relative humidity, non-condensing
Enclosure waterproof rating	IP20
Power Supply	Benchtop Power Supply
Power requirements (Voltage)	100 - 240 V AC
Power requirements (Hz)	50/60 Hz
Interfaces	Use only shielded cable with maximum length of 3 m 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 for: 1x Ethernet
Warranty	24 months

**Subject to change without notice.*

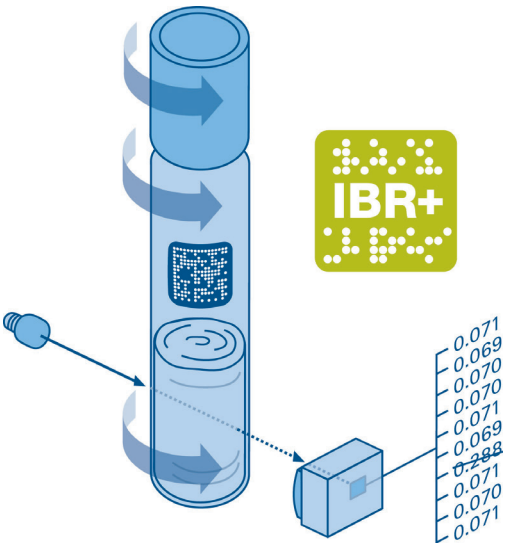
Principle of Operation

For your confidence - generate measurement results with highest accuracy and precision.

- *Measured outliers are prevented by the unique 10-fold rotation measurement by detecting possible contamination on the cuvette.*
- *No negative impact on results due to fluctuating chemical raw material qualities.*

The calibration curve is automatically adjusted for each cuvette using Hach Truecal.

- *You will receive a warning from your photometer if the shelf life of the reagents in the cuvette test has expired.*
- *Most of our cuvette tests are based on common standard procedures and therefore have a high level of official acceptance.*
- *Hach is the only supplier who was able to implement the original formulation of the international COD standard ISO15705 in cuvette tests.*
- *Our nitrogen cuvette tests also meet the strict criteria of international norming and are standardized according to ISO 23695 (ammonium), ISO 23696 (nitrate) and ISO 23697 (total nitrogen).*



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	Measuring range	Part number
Acid capacity	0.5 - 8.0 mmol/L	LCK362
Alcohol	0.01 - 0.12 g/L	LCK300
Aluminium	0.02 - 0.5 mg/L Al	LCK301
Ammonium	0.015 - 130 mg/L NH_4-N	LCK302, LCK303, LCK304, LCK305, LCK502, LCK503, LCK504, LCK505
Anammox Activity	0 - 1000 mAbs	LCK411.00
AOX	0.05 - 3.0 mg/L AOX	LCK390.00
BOD_5	0.5 - 1650 mg/L O_2	LCK554, LCK555
Boron	0.05 - 2.50 mg/L B	LCK307
Cadmium	0.02 - 0.3 mg/L Cd	LCK308
Carbonate/ carbon dioxide	55 - 550 mg/L CO_2	LCK388
Chloride	1 - 1000 mg/L Cl	LCK311
Chlorine, free	0.05 - 2.0 mg/L Chlorine free/ClO_2	LCK410
Chlorine/ Ozone/ Chlorine dioxide	0.05 - 2.0 mg/L Cl_2	LCK310
Chromic acid	0.5 - 5.0 g/L CrO_3	LCK213
Chromium	0.03 - 1.0 mg/L Cr VI	LCK313
Chromium, trace	0.005 - 0.25 mg/L Cr (VI)	LCS313
COD	0 - 10000 mg/L O_2	LCI400, LCI500, LCK014, LCK1414, LCK1717, LCK1814, LCK1914, LCK214, LCK314, LCK414, LCK514, LCK614, LCK714, LCK914
Copper	0.1 - 8.0 mg/L Cu	LCK329
Copper, trace	0.01 - 1.0 mg/L Cu	LCK529
Copper baths (acidic)	2 - 100 g/L Cu	LCK229
Cyanide, free	0.01 - 0.6 mg/L CN	LCK315
Cyanide, easily liberatable	0.03 - 0.35 mg/L CN	LCK319
Fluoride	0.1 - 2.5 mg/L F	LCK323
Formaldehyde	0.5 - 10 mg/L H_2CO	LCK325, LCK425
Formaldehyde, trace	0.01 - 3.0 mg/L H_2CO	LCS325, LCS425
Hydrazine	0.01 - 2.0 mg/L N_2H_4	LCW025
Hydrogen peroxide	1 - 10 g/L H_2O_2	LCW058
Iron	0.01 - 6.0 mg/L Fe	LCK320, LCK321
Iron, trace	0.005 - 2.0 mg/L Fe	LCK521, LCW021
Lead	0.1 - 2.0 mg/L Pb	LCK306
Magnesium	0.5 - 50 mg/L Mg	LCK326
Manganese	0.005 to 5.0 mg/L Mn	LCW032, LCW532, LCW632
Menthol	0.5 - 15 mg/100 mL Menthol	LYW185
Molybdenum	3 - 300 mg/L Mo	LCK330
Nickel	0.1 - 6.0 mg/L Ni	LCK337
Nickel (trace)	0.05 - 1.0 mg/L Ni	LCK537

Parameter	Measuring range	Part number
Nickel baths (acidic)	5 - 120 g/L Ni	LCK237
Nitrate	0.23 - 150 mg/L NO_3-N	LCK339, LCK340, LCK540
Nitrite	0.015 - 90 mg/L NO_2-N	LCK341, LCK342, LCK343
Nitrite (trace)	0.0015 - 0.03 mg/L NO_2-N	LCK541
Nitrogen total (Laton)	1 - 250 mg/L TN_b	LCK138, LCK238, LCK338, LCK438
Organic acids	50 - 2500 mg/L as Acetic acid	LCK365
Phosphate, ortho (trace)	0.01 - 0.5 mg/L PO_4-P	LCK549
CODMn	0.05 - 150 mg/L O_2	LCK394
Phenols	0.05 - 150 mg/L Phenols	LCK345, LCK346
Phosphate, ortho	1.6 - 30 mg/L PO_4-P	LCK049
Phosphate, ortho + total	0.05 - 100 mg/L PO_4-P	LCK348, LCK349, LCK350, LCK351
Phosphate, ortho + total (trace)	0.01 - 0.5 mg/L PO_4-P	LCS349
Photometric Iodine sample (PIS)	> 0.2	LCK240
Potassium	5 - 50 mg/L K	LCK228, LCK328
Reducing agent	0.05 - 1.0 mg/L DEHA	LCW250
Silica	0.01 - 0.8 mg/L SiO_2	LCW028
Silver	0.04 - 2500 mg/L Ag	LCK354, LCK355
Sludge activity	5 - 200 µg Formazan (SA)	LCK318
Starch	2 - 150 mg/L Starch	LCK357
Sulphate	40 - 900 mg/L SO_4	LCK153, LCK353
Sulphide	0.1 - 2.0 mg/L S^{2-}	LCK653, LCW053
Sulphite	0.1 - 5.0 mg/L SO_3^{2-}	LCK654, LCW054
Surfactants, anionic	0.05 - 4.0 mg/L	LCK332, LCK432
Surfactants, cationic	0.2 - 2.0 mg/L	LCK331
Surfactants, nonionic	0.2 - 200 mg/L as Triton x 100	LCK333, LCK433
Surfactants, nonionic	0.1 - 20 g/L	LCK334
Vicinal diketones (VDK)	0.015 - 0.5 mg/kg Diacetyl	LCK242
Water hardness	1 - 20 °dH	LCK327
Water hardness, residual	0.02 - 0.6 °dH	LCK427
Tin	0.1 - 2.0 mg/L Sn	LCK359
TOC	2 - 3000 mg/L C	LCK380, LCK381, LCK385, LCK386, LCK387
Zinc	0.2 - 6.0 mg/L Zn	LCK360
Zinc, trace	0.02 - 0.8 mg/L Zn	LCS360
Zirconium	6 - 60 mg/L	LCK364

Special Features

Parameter	Part number	Temperature Compensation	Temperature Warning	Turbidity Warning
Nitrogen total (Laton)	LCK138		•	
	LCK238		•	
	LCK338		•	
Nitrate	LCK339		•	
	LCK340		•	
Ammonium	LCK303	•	•	
	LCK304	•	•	
	LCK305	•	•	
COD	LCK014		•	•
	LCK114		•	•
	LCK314		•	•
	LCK514		•	•
	LCK1414		•	•
	LCI400		•	•
	LCI500		•	•
	LCK914		•	•
	LCK614		•	•

Order Information

LPV451.99.00011 DR4900 Laboratory Spectrophotometer, without camera

LPV451.99.00111 DR4900 Laboratory Spectrophotometer, with camera

Accessories

LZV537 Validation filter kit for spectrophotometer

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