

# DR 1900 PORTABLE SPECTROPHOTOMETER

## Applications

- Drinking Water
- Wastewater
- Field Use
- Industrial Water
- Power



## Carry more water methods with you wherever you need them most.

The DR 1900 combines the ruggedness and portability of a field instrument with over 220 of the most commonly tested water methods.

### Carry Anywhere

The lightest, most compact portable spectrophotometer available easily goes where you need to go.

### Test What You Need

Analyze your water with more preprogrammed methods than any other portable spectrophotometer, or easily create your own methods to suit your unique needs.

### Ensure Accuracy in the Field

Wavelength range of 340 to 800 nm. provides accuracy typically seen only in laboratory instruments.

### Make Testing Easier

Simple, easy-to-use interface plus the widest range of vial sizes makes testing flexible.

### Take Into Field Environments

Rugged construction keeps the elements out, which means you can test in the most demanding conditions.



Be Right™

## Specifications\*

<b>Operating Mode</b>	Transmittance (%), Absorbance and Concentration
<b>Source Lamp</b>	Xenon Flash
<b>Wavelength Range</b>	340 to 800 nm
<b>Wavelength Accuracy</b>	± 2 nm (range 340 - 800nm)
<b>Wavelength Selection</b>	Automatic
<b>Wavelength Reproducibility</b>	± 0.1 nm
<b>Spectral bandwidth</b>	5 nm
<b>Photometric Measuring Range</b>	0 to 3 Abs (wavelength range 340 – 800 nm)
<b>Photometric Accuracy</b>	± 0.003 Abs @ 0.0 - 0.5 Abs
<b>Photometric Linearity</b>	< 0.5 % (0.5 - 2.0 Abs)
<b>Stray Light</b>	< 0.1 %T at 340 nm with NaNO <sub>2</sub>
<b>Display</b>	Graphical display 240 x 160 pixel (LCD, b/w, backlit)
<b>Data Logger</b>	500 measured values (Result, Date, Time, Sample ID, User ID acc. to GLP)

<b>Preprogrammed Methods</b>	> 220
<b>User Programs</b>	50
<b>Sample Cell Compatibility</b>	13 / 16 mm and 1 inch round adapter, 1 inch square and 10x10mm
<b>Dimensions (H x W x D)</b>	3.9 in x 7 in x 10.5 in (98 mm x 178 mm x 267 mm)
<b>Weight</b>	3.31 lbs. (1.5 kg)
<b>Operating Conditions</b>	10 to 40 °C (50 - 104 °F), max. 80 % relative humidity (non-condensing)
<b>Storage Conditions</b>	-30 to 60 °C (-22 to 140 °F), max. 80 % relative humidity (non-condensing)
<b>Enclosure Rating</b>	IP67

*\*Subject to change without notice.*

## Available Tests

The following table lists available tests and overall ranges for the Hach DR 1900 Portable Spectrophotometer. The ranges may represent more than one available test for the instrument.

Parameter	Range	Parameter	Range
Acid Capacity Ks 4,3	0.5 - 8 mmol/L	Iron, Total	0.009 to 6.0 mg/L
Alachlor	0.1 to 0.5 ppb, threshold	Lead	0.005 to 2.0 mg/L
Alcohol	0.01 - 0.12 mg/L	Magnesium	0.5 to 50 mg/L
Alkalinity, Total	25 to 400 mg/L	Manganese	0.005 to 20.0 mg/L
Aluminum	0.002 to 0.800 mg/L	Menthol within Distillate	0.5 - 15 mg/100mL
Ammonia, Nitrogen	0.025 to 167 mg/L	Mercury	0.1 to 2.5 µg/L
AOX	0.005 to 3 mg/L	Molybdenum, Molybdate	0.02 to 300.0 mg/L
Arsenic	0 to 0.2 mg/L	Nickel	0.006 to 6.0 mg/L
Barium	2 to 100 mg/L	Nickelbaths, acidous	5 to 120 g/L
Benzotriazole	1 to 16 mg/L	Nitrate, Nitrogen	0.22 to 150 mg/L
BOD5	0.5 to 1,650 mg/L	Nitrite, Nitrogen	0.007 to 250 mg/L
Boron	0.05 to 14 mg/L	Nitrogen, Total	1 to 100 mg/L
Bromine	0.05 to 4.50 mg/L	Nitrogen, Total Kjeldahl	1 to 150 mg/L
Cadmium	0.02 to 0.30 mg/L	Organic Acids	27 to 2,800 mg/L Acetic Acid
Carbonate/Carbon Dioxide	55 to 550 mg/L	Oxygen Scavengers	0.003 to 1 DEHA
Chloramine, Mono	0.04 to 4.5 mg/L	Ozone	0.1 to 2.0 mg/L
Chloride	0.1 to 1,000 mg/L	PCB (Polychlorinated Biphenyls)	1 to 50 ppm, threshold
Chlorine Dioxide	0.01 to 5 mg/L	Phenols	0.002 to 0.200 mg/L
Chlorine, Free	0.02 to 10.0 mg/L	Phosponates	0.02 to 125.0 mg/L
Chlorine, Total	0.02 to 10.0 mg/L	Phosphorus, Reactive (Orthophosphate)	19 µg/L to 90 mg/L
Chromium Acid Baths	50 to 450 g/L	Phosphorus, Total	0.15 to 60 mg/L
Chromium, Hexavalent	0.010 to 1.00 mg/L	Potassium	0.1 to 50 mg/L
Chromium, Total	0.01 to 1.0 mg/L	Quaternary Ammonium Compounds	0.2 to 5.0 mg/L
Cobalt	0.01 to 2.00 mg/L	Selenium	0.01 to 1 mg/L
COD (Chemical Oxygen Demand)	0 to 60,000 mg/L	Silicic acid	0.003-100 mg/L
Color	5 to 500 units	Silver	0.005 to 2,500 mg/L
Copper	0.001 to 8.0 mg/L	Sludge activity (TTC)	
Copperbaths, Acidous	2 -100 g/L	Starch	2 to 150 mg/L
Cyanide	0.002 to 0.6 mg/L	Sulfate	2 to 900 mg/L
Cyanuric Acid	5 to 50 mg/L	Sulfide	0.005 to 2 mg/L
Dissolved Oxygen	0.006 to 40 mg/L	Sulfite	0.01 to 5 mg/L
Fluoride	0.02 to 2.00 mg/L	Surfactants	0.002 to 200 mg/L
Formaldehyde	0.003 to 10 mg/L	(Anionic, Cationic, Non-ionic)	
Hardness, Total (Calcium and Magnesium as CaCO <sub>3</sub> )	0.07 mg/L to 4.00 mg/L	Suspended Solids	5 to 750 mg/L
Hydrazine	0.004 to 2 mg/L	Tannin and Lignin	0.1 to 0.9 mg/L
Hydrogen Peroxide	1 -10 g/L	Tin	0.1 to 2 mg/L
Iodine	0.07 to 7.00 mg/L	TOC (Total Organic Carbon)	2 to 3,000 mg/L
Iron, Ferrous	0.02 to 3.00 mg/L	TTHM (Trihalomethanes, Total)	10 to 600 µg/L

Note: The TNTplus® cuvette test evaluation is possible, but without barcode reading & 10-fold measurement features.

## Ordering Information

DR 1900 Portable Spectrophotometer includes basic printed instrument manual, dust cover, 1-in. square glass sample cells, AA batteries and adapter set.

- DR1900-01H** DR 1900 Portable Spectrophotometer  
**9624700** DR 1900 Portable Spectrophotometer with USB+Power Module

## Accessories

- LZV804** Power Module  
Includes module, universal power supply, and manual
- LZV813** USB+Power Module  
Includes module, universal power supply, standard USB cable, special USB cable adapter, and manual
- LZV949** USB Module  
includes module, standard USB cable, special USB cable adapter, and manual
- 2960100** Citizen PD-24 Printer Package
- 2763900** DR/Check Absorbance Standard Kit (Set of 4)
- LZV537** Test Filter Set
- 2990700** Small Backpack with Cases, for portable equipment

## Service Options

Comprehensive bench repair includes all parts, labor and shipping costs from the factory for depot repairs, one calibration per year at factory, factory recommended maintenance (including required parts) and unlimited technical support calls. A loaner instrument will be provided during factory repair, based on availability.

- BSPDR1900** DR 1900 Portable Spectrophotometer Bench Service Partnership





Thank you for reading this data sheet.

For pricing or for further information, please contact us at our UK Office, using the details below.



**UK Office**

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Please note - Product designs and specifications are subject to change without notice. The user is responsible for determining the suitability of this product.