



## DR3900 Laboratory VIS Spectrophotometer with RFID\* Technology

**Product #:**

**LPV440.99.00012**

**ZAR Price:**

Contact Hach

Ships within 3-5 weeks

### Optimized for safe processes and consistent, quick and accurate water analysis results

The DR3900 is a benchtop visible spectrum (320 - 1100 nm), split beam spectrophotometer with over 220 pre-programmed methods optimized for laboratory water analysis. With your daily routine of water analysis in mind, the DR3900 spectrophotometer is optimized for safe processes and accurate results.

The DR3900 is designed to deliver accurate results quickly with Hach's innovative TNTplus and LCK reagents for fast preparation and easy execution. In fact, it automatically recognizes our Hach reagents, so there is no need to enter method numbers.

#### Guided Procedures

The DR3900 simplifies water analysis by with step-by-step guides which take users through testing procedures. This helps ensure consistent and accurate results.

#### RFID Technology

Featuring state-of-the-art Radio Frequency Identification (RFID) technology\* allows for hands-free calibration updates, as it automatically recognizes the lot, expiration and calibration curves associated with each Hach chemistry sample. It also allows for traceability for each measurement.

#### Claros Enabled

This instrument connects to Claros, Hach's innovative Water Intelligence System, enabling you to seamlessly connect and manage instruments, data, and process – anywhere, anytime. The result is greater confidence in your data and improved efficiency in your operations.

#### Other Key Features

- Optimized for safe processes and accurate results.
- Large color touchscreen display allows easy setup and navigation.
- RFID technology eliminates sample mix-ups and provides better sample traceability.
- Built with 1 ethernet and 3 USB ports, so easily connects to your computer.
- Over 35 tests available including EPA compliant parameters such as ammonia, COD, chlorine and more.

\*RFID technology currently available only in US, and certain other countries. Check the datasheet for country availability.

Simple Preparation

TNTplus vials use Dosicaps - freeze-dried reagents integrated into sealed cap - that are easier to use than Powder Pillows or Liquid Reagents, without any risk of contamination. The boxes and vials are color-coded for a fast and easy parameter and range recognition of exactly the test you need.

Step-by-step illustrated test methods are printed on the box as a quick reference and can also be called up in the instrument menu.

Comprehensive Documentation

Measurement results are documented on the detailed level with timestamp, operator ID, absorbance reading, and calculated concentration. The 2D barcode delivers the lot number and expiry date, logged with every result.

For your accreditation the certificate of analysis can be called up just by wiping the reagent box towards the RFID\* sensor.

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Fast Execution

A 2D barcode on the TNTplus vial is automatically read by the Hach DR spectrophotometer to identify the appropriate method and take the measurement.

The vial spins to take 10-fold absorbance readings that will be averaged for result determination to exclude scratches and fingerprints. Instrument calibration verification and high instrument stability all combine to eliminate the need to run reagent blanks.

Customizable

With the ability to store hundreds of user-determined methods, operators are able to tailor the DR3900 to meet the everyday needs of the plant.

Being able to optimize and customize the method portfolio, combined with regular software updates and Claros connectivity, makes the DR3900 the ultimate solution to water quality lab needs.

Specifications

Beam Height:	10 mm
Data Logger:	2000 measured values (Result, Date, Time, Sample ID, User ID)
Dimensions (H x W x D):	151 mm x 350 mm x 255 mm
Display:	7" TFT
Display Resolution:	WVGA (800 pix x 480 pix)
Display Size:	7 inch (17.8 cm)
Display Type:	Colored touch-screen
Enclosure rating:	IP30
Interfaces:	USB type A (2)
	USB type B
	Ethernet
	RFID module
	English
	French (CDN)
	Spanish (SA)
Manual Languages:	Portuguese (BR)
	Chinese
	Japanese

	Korean
Max. operating humidity:	80 %
Max. Storage Humidity:	80 %
Operating conditions:	10 - 40 °C
Operating Mode:	Transmittance (%), Absorbance and Concentration, Scanning
Optical System:	Reference beam, spectral
Photometric Accuracy:	5 mAbs @ 0.0 - 0.5 Abs
Photometric Accuracy 2:	1 % at 0.50 - 2.0 Abs
Photometric Linearity:	< 0.5 % - 2 Abs
Photometric Linearity 2:	≤ 0.01 % at >2 Abs with neutral glass at 546 nm
Photometric Measuring Range:	± 3.0 Abs (wavelength range 340 - 900 nm)
Power Requirement:	With external power supply
Power requirements (Hz):	50/60 Hz
Power requirements (Voltage):	110 - 240 VAC
Power Supply:	Benchtop Power Supply
Preprogrammed methods:	> 240
Sample Cell Compatibility:	Rectangular: 10, 50 mm, 1 inch; round: 13 mm, 16 mm, 1 inch
Scanning Speed:	> 8 nm/S (in steps of 1 nm)
Source Lamp:	Gas-filled Tungsten (visible)
Specific Technology:	RFID for easy method update, sample ID and Certificate of Analysis
Spectral Bandwidth:	5 nm
Standard accessories:	None
Storage conditions:	-30 - 60 °C
Stray Light:	< 0.1 % T at 340 nm with NaNO <sub>2</sub>
User Interface Languages:	Bulgarian, Chinese, Croatian, Czech, Danish, Dutch, English, Finnish, French, German, Greek, Hungarian, Italian, Japanese, Korean, Polish, Portuguese - Brazilian, Portuguese, Russian, Serbian, Slovakian, Slovenian, Spanish, Swedish, Turkish
User programs:	100
Warranty:	12 months
Wavelength Accuracy:	± 1.5 nm (wavelength range 340 - 900 nm)
Wavelength Calibration:	Automatic
Wavelength Range:	320 - 1100 nm
Wavelength Reproducibility:	± 0.1 nm
Wavelength Resolution:	1 nm
Wavelength Selection:	Automatic
Weight:	4.2 kg
What's included?:	Includes: Spectrophotometer DR3900, adapter A for 1 in. round and 1 cm square cells, matched pair of 1 in. square glass sample cells, light shield, dust cover, printed basic user manual and benchtop power supply with 115 and 230V power cords.

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