

DR/800

Series Colorimeters

High-Value, High-Capability Instruments
for Water Quality Analysis



Be Right™

DR/800

Series Colorimeters

Hach DR/800 Series Colorimeters combine ease of use, multiple testing capabilities and field readiness. Analysis requires minimal time and preparation, with results displayed directly on the large liquid-crystal display in concentration, percent transmittance, or absorbance units.

Choose from Three Models

Depending on your testing needs, you can select a DR/820, DR/850 or DR/890 Colorimeter, preprogrammed to test for at least 20, 50 or 90 parameters, respectively. All three models include the same convenient features: auto-wavelength selection, datalogging capabilities and user-generated calibrations. Refer to the table on pages 6-7 to select the colorimeter that tests the parameters required by your program. These durable, hand-held, filter-photometer instruments are designed specifically for the rigors of on-site testing, with rugged components and waterproof, dustproof, chemical-resistant housings. DR/800 Series Colorimeters offer simple, push-button program selection and step-by-step prompts that guide users through the testing procedure. These instruments are equally appreciated by experienced analysts who value test efficiency and by operators who require ease of use with accurate results.



Advanced Features Add Value

- Easy-to-use software offers push-button method selection, automatic wavelength selection and a preprogrammed method timer. Result, units, and parameter name are displayed immediately, with no countdown. The large digit display is very easy to read.
- The DR/800 retains the selected method until a new method is entered, even if it is turned off and then back on. This allows a series of analyses to be performed for the same parameter without reselecting the method.
- Datalogging capability includes push-button record management. Easily store data in the field for later access, with no delay in testing. The instrument stores up to 99 measurements in an internal, non-volatile memory. Data stored includes date/time, parameter, program number, concentration/absorbance/%T, sample number, and instrument serial number.
- Results are displayed directly in units of concentration, absorbance, or % transmittance. In many methods, concentration in alternate chemical forms is also available. For example, phosphate readings are available as P, PO₄ and P₂O₅. Displayed results can be changed from one form to the next at the touch of a button.
- User-program feature allows users to generate up to 10 custom procedures, with up to 12 data points each, and store them in a non-volatile instrument memory for later use.
- Advanced software includes automatic correction for reagent blanks and the option to fine-tune calibration curves with the standard adjust feature.
- Batteries provide self-contained power for field-testing. All battery-powered instruments listed in this brochure are marked with the battery symbol (🔋).

Accessories Simplify Data Management

The Data Transfer Adapter (DTA) fits on the colorimeter and accepts data sent from the instrument's infrared LED transmitter. The DTA converts data to a standard RS-232 format and connects directly to a computer or printer. Data can be printed or downloaded conveniently, after storage or during collection.

DR/800 Series Colorimeters are compatible with HachLink™ Software, a Microsoft® Windows® compatible application that links instrument and computer, providing a convenient means of accessing and managing test data. Information including date/time, parameter, concentration/absorbance/%T, sample number, operator identity, and instrument serial number is accepted and stored in either text or tabular (spreadsheet) format, and can be easily transferred to popular spreadsheet or word-processing applications.

Easy Quality Control

DR/Check™ ABS Standards are the optional choice to verify the performance of your DR/800 Colorimeter in seconds. Standards are formulated with neutral density gel that produces similar absorbance readings at any wavelength. For all parameters at all wavelengths, running three secondary absorbance standards will verify your instrument's calibration easily, anytime.

Affordable COD Analysis

All three models include Hach's Manganese III COD procedure (mercury-free version). The DR/850 Colorimeter also performs our traditional USEPA-approved low-range COD procedure, and the DR/890 Colorimeter performs both low-range and high-range USEPA-approved COD procedures. An adapter suitable for COD vials, Test 'N Tube™ (TNT) vials, and *UniCell*™ vials is included with each instrument.

Push-Button Operation Speeds Analysis

Using Hach prepared reagents, testing is normally accomplished in just a few minutes, following this simple procedure:

1. When turned on, the instrument automatically recalls the last program used. To change programs, press the program key and enter the program number from the procedures manual. The instrument displays the program number, parameter, units, and the zero icon.
2. Prepare the blank (zero) according to the procedure, place it in the instrument, and press the zero key. The instrument displays the zero and the read icon.
3. Prepare the sample according to the procedure. (An internal timer is preprogrammed for methods that require a fixed reaction time. Timer duration is automatically displayed for the selected procedure; simply start the timer at the start of the reaction.) After reacting the sample, place the sample cell in the instrument and press the read key.
4. The instrument displays the result in concentration units. The user can also toggle the ABS %T key to display absorbance or % transmittance. Some results can be displayed in alternate chemical forms (e.g., Cr may be displayed as mg/L CrO₄ or Cr₂O₇). Scroll through available forms by pressing the concentration key.
5. Save the results by pressing the store key. The instrument will store up to 99 measurements in an internal, non-volatile memory. Results may be printed or transferred to a computer at any time using the Data Transfer Adapter.



DR/800

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Ergonomically designed instrument fits comfortably in the palm of your hand, with all functions easily accessible.



Large LCD display prompts user step by step through procedures. Separate areas of the display indicate procedure number, sample number, parameter, test results, units of measure, and other data.

Instrument cap slides off and is used as a light shield during measurement.

All instrument setup and operation functions are accessible by the keypad. Following prompts provided on the instrument display, the user selects the appropriate program, zeroes the instrument, reacts the sample, and reads the results.

Up to 99 individual readings can be stored and recalled with the touch of a button.

Built-in timer is preprogrammed for methods requiring a fixed reaction time and can be set by the user.



Instrument Specifications

Wavelength Selection: Auto Select

Photometric Range: 0 to 2 A

Operational Modes: Concentration, ABS, %T

Concentration Units: µg/L, mg/L, g/L, ABS, %T

External Outputs: Data Transfer Adapter (optional), IR to RS-232

Datalogging: 50 sample readings (each reading includes date/time, parameter, program number, concentration, absorbance, % transmittance, sample number, instrument serial number)

User Programs: 10 user-entered programs, 12 data points each

Display: Large liquid-crystal display (LCD) shows results, parameter name, and units

Dimensions: 23.6 x 8.7 x 4.7 cm (9.3 x 3.4 x 1.9")

Weight: 470 g (1 lb)

Power: 4 AA alkaline or rechargeable alkaline batteries, nominal life of six months


Storage Temperature Range: -40 to 60°C (-40 to 140°F)

Operating Temperature Range: 0 to 50°C (32 to 120°F)

Environmental: Meets IP67 standard, dustproof and waterproof to one meter for 30 minutes

Compliance: European CE Mark

How To Order

Each DR/800 Series Colorimeter includes two sample cells marked at 10, 20 and 25 mL, 16-mm COD/TNT/UniCell[®] adapter, batteries and illustrated instrument and procedure manuals. 

48440-00 DR/820 Colorimeter

48450-00 DR/850 Colorimeter

48470-00 DR/890 Colorimeter



Optional carrying cases provide ample room for the instrument, accessories, manual, and additional reagent sets.

Optional Instrumentation

51700-10 sensIon™1 Portable pH Meter with Platinum Series pH Electrode

51800-10 sensIon™5 Conductivity Meter with Electrode and 1 m (40") Cable

54650-15 sensIon™156 Meter. A combination, portable meter available in different configurations combining pH, conductivity, and dissolved oxygen capability with different types of probes. Ask your sales representative for model details.

54750-15 sensIon™378 Meter. A combination, laboratory meter available in different configurations combining pH, conductivity, and dissolved oxygen capability with different types of probes. Ask your sales representative for model details.

45600-00 COD Reactor for efficient digestion of up to 25 COD/TNT/UniCell[®] vials

DRB 100 Compact digital reactor accommodating up to 16 COD/TNT/UniCell[®] vials

46500-00 2100 Portable Turbidimeter Kit

52600-00 Pocket Turbidimeter™ Analysis System

16900-01 Digital Titrator

Request Lit. No. 4360 for more e-chem products.

Accessories

48490-00 Data Transfer Adapter, IR to RS-232, with cable

27639-00 DR/Check™ Absorbance Standards for DR/800 verification

49425-00 Instrument carrying case (hard sided)

27220-00 Instrument carrying case with shoulder strap (soft sided)

49430-00 CEL Portable Laboratory carrying case. Roomy field case includes space for the colorimeter, optional instrumentation, accessories, reagent sets and apparatus.

49665-00 HachLink™ Software Package

19380-04 Alkaline batteries size AA, pk/4

49427-00 Rechargeable Alkaline Batteries (Rayovac[®] Renew) size AA, pk/4

49428-00 Recharging Unit for Rayovac Renew Batteries



Data Transfer Adapter converts infrared signals from the instrument to standard RS-232 protocol. The adapter fits over the instrument in place of the cap and connects directly to a printer or computer.

Parameter List and Reagent Sets

DR/800

Parameter	Range*	No. of Tests	Cat. No.	DR/820	DR/850	DR/890
Aluminum, Aluminon	0 - 0.8	100	22420-00	•	•	•
Aluminum, <i>UniCell</i> [™] ***	0.02 - 0.50	23	HCT 150 ^{††}			•
Ammonium, <i>UniCell</i> [™] ***	1.5 - 45	23	HCT 102			•
Ammonium, <i>UniCell</i> [™] ***	0.05 - 1.5	23	HCT 100			•
Benzotriazole	0 - 16	100	21412-99			•
Boron, LR	0 - 1.60	100	26669-00			•
Bromine	0 - 4.50	100	21056-69	•	•	•
Bromine (AccuVac [®])	0 - 4.50	25	25030-25	•	•	•
Cadmium, <i>UniCell</i> [™] ***	0.02 - 0.30	23	HCT 154			•
Chlorine, Free, HR	0 - 5.00	100	14070-99	•	•	•
Chlorine, Free (USEPA)	0 - 2.00	100	21055-69	•	•	•
Chlorine, Free (AccuVac [®]) (USEPA)	0 - 2.00	25	25020-25	•	•	•
Chlorine, Free, TNT	0 - 5.00	25	21055-25	•	•	•
Chlorine, Total, HR	0 - 5.00	100	14064-99	•	•	•
Chlorine, Total (USEPA)	0 - 2.00	100	21056-69	•	•	•
Chlorine, Total (AccuVac [®]) (USEPA)	0 - 2.00	25	25030-25	•	•	•
Chlorine, Total, TNT	0 - 5.00	25	21056-25	•	•	•
Chlorine Dioxide, MR	0 - 50	—	—			•
Chromium, Hexavalent (USEPA)	0 - 0.60	100	12710-99			•
Chromium, Hexavalent (AccuVac [®]) (USEPA)	0 - 0.60	25	25050-25			•
Chromium, Total	0 - 0.60	100	22425-00			•
Chromium, <i>UniCell</i> [™] ***	0.03 - 1.00	23	HCT 156 ^{††}			•
Color, True and Apparent	0 - 500	—	—			•
Copper, Bicinchoninate (USEPA)**	0 - 5.0	100	21058-69			•
Copper, Bicinchoninate (AccuVac [®]) (USEPA)**	0 - 5.0	25	25040-25			•
Copper, Porphyrin, LR	0 - 210 µg/L	100	26033-00			•
Copper, <i>UniCell</i> [™] ***	0.1 - 6.00	23	HCT 163 ^{††}			•
Cyanide	0 - 0.240	100	24302-00		•	•
Cyanuric Acid	7 - 55	50	2460-66	•	•	•
DEHA	0 - 500 µg/L	100	24466-00			•
Detergents (Surfactants)	0 - 0.30	100	24468-00		•	•
Fluoride, SPADNS***	0 - 2.0	100	444-49		•	•
Fluoride, SPADNS (AccuVac [®])***	0 - 2.0	25	25060-25		•	•
Fluoride, <i>UniCell</i> [™] ***	0.1 - 1.5	23	HCT 132			•
Hardness, Calcium as CaCO ₃	0 - 4.0	100	23199-00	•	•	•
Hardness, Magnesium as CaCO ₃	0 - 4.0	100	23199-00	•	•	•
Hydrazine	0 - 500 µg/L	100	1790-32			•
Hydrazine (AccuVac [®])	0 - 500 µg/L	25	25240-25			•
Iron, Ferrous	0 - 3.0	100	1037-69	•	•	•
Iron, Ferrous (AccuVac [®])	0 - 3.0	25	25140-25	•	•	•
Iron, Total, FerroMo [™]	0 - 1.8	100	25448-00		•	•
Iron, Total, FerroVer [®] (USEPA)**	0 - 3.0	100	21057-69	•	•	•
Iron, Total, FerroVer [®] (AccuVac [®]) (USEPA)**	0 - 3.0	25	25070-25	•	•	•
Iron, Total, FerroZine [®]	0 - 1.3	50	2301-66			•
Iron, Total, TPTZ	0 - 1.8	100	26087-99		•	•
Iron, Total, TPTZ (AccuVac [®])	0 - 1.8	25	25100-25		•	•
Iron, <i>UniCell</i> [™] ***	0.1 - 5.00	23	HCT 159 ^{††}			•
Lead, <i>UniCell</i> [™] ***	0.1 - 2.00	23	HCT 152 ^{††}			•
Manganese, HR (USEPA)**	0 - 20	100	24300-00	•	•	•
Manganese, LR	0 - 0.70	50	26517-00			•
Metal Prep Set, <i>UniCell</i> [™]	-	23	HCT 200			•
Molybdenum, Molybdate, HR	0 - 40	100	26041-00			•
Molybdenum, Molybdate, HR (AccuVac [®])	0 - 40	25	25220-98			•
Molybdenum, Ternary Complex, LR	0 - 3.0	100	24494-00		•	•
Nickel, PAN	0 - 1.0	100	22426-00			•
Nickel, <i>UniCell</i> [™] ***	0.1 - 6.00	23	HCT 167 ^{††}			•
Nitrate, Cadmium Reduction, HR	0 - 30	100	21061-69	•	•	•
Nitrate, Cadmium Reduction, HR (AccuVac [®])	0 - 30	25	25110-25	•	•	•
Nitrate, Cadmium Reduction, MR	0 - 5.0	100	21061-69			•

Series Colorimeter Reagent Sets

Parameter	Range*	No. of Tests	Cat. No.	DR/820	DR/850	DR/890
Nitrate, Cadmium Reduction, MR (AccuVac®)	0 - 5.0	25	25110-25			•
Nitrate, Cadmium Reduction, LR	0 - 0.50	100	24298-45	•	•	•
Nitrate, Chromotropic Acid, HR, TNT	0 - 30	50	26053-45			•
Nitrite, HR	0 - 150	100	21075-69			•
Nitrite, LR (USEPA)	0 - 0.35	100	21071-69	•	•	•
Nitrite, LR (AccuVac®) (USEPA)	0 - 0.35	25	25120-25	•	•	•
Nitrite, TNT	0 - 0.50	50	26083-45	•	•	•
Nitrogen, Ammonia, Salicylate	0 - 0.50	100	26680-00		•	•
Nitrogen, Ammonia, LR, TNT	0 - 2.50	50	26045-45		•	•
Nitrogen, Ammonia, HR, TNT	0 - 50	50	26069-45		•	•
Nitrogen, Monochloramine and Free Ammonia, Salicylate	0 - 0.50	50	26184-00		•	•
Nitrogen, Monochloramine and Free Ammonia, Salicylate (AccuVac®)	0 - 0.50	25	25210-98		•	•
Nitrogen, TKN with Nessler finish**	0 - 150	100	24953-00			•
Nitrogen, Total, Persulfate Digestion, TNT	0 - 25	50	26722-45†			•
Nitrogen, Total, HR, TNT	0 - 150	50	27141-00†			•
Nitrogen, Total Inorganic, TNT	0 - 25	50	26049-45		•	•
Oxygen, Dissolved, HR (AccuVac®)	0 - 15	25	25150-25	•	•	•
Oxygen, Dissolved, LR (AccuVac®)	0 - 1000 µg/L	25	25010-25		•	•
Oxygen Demand, Chemical, LR (USEPA)	0 - 150	25	21258-25†			•
Oxygen Demand, Chemical, HR (USEPA)	0 - 1500	25	21259-25†		•	•
Oxygen Demand, Chemical, HR	0 - 15,000	25	24159-25†		•	•
Oxygen Demand, Chemical, Manganese III	20 - 1000	25	26234-25†	•	•	•
Ozone, LR (AccuVac®)	0 - 0.25	25	25160-25		•	•
Ozone, MR (AccuVac®)	0 - 0.75	25	25170-25		•	•
Ozone, HR (AccuVac®)	0 - 1.5	25	25180-25		•	•
pH	6.5 - 8.5 pH	50	26575-12	•	•	•
Phosphate, UniCell™ †††	1.5 - 15	23	HCT 121†			•
Phosphate, UniCell™ †††	6 - 60	23	HCT 122†			•
Phosphonates	0 - 125	100	24297-00		•	•
Phosphorus, Molybdovanadate	0 - 45	100	20760-32			•
Phosphorus, Molybdovanadate (AccuVac®)	0 - 45	25	25250-25			•
Phosphorus, PhosVer® 3 (USEPA)	0 - 2.5	100	21060-69		•	•
Phosphorus, PhosVer® 3 (AccuVac®) (USEPA)	0 - 2.5	25	25080-25		•	•
Phosphorus, PhosVer® 3, TNT (USEPA)	0 - 5.0	50	27425-45		•	•
Phosphorus, Total, PhosVer® 3, TNT (USEPA)	0 - 3.5	50	27426-45†		•	•
Phosphorus, Acid Hydrolyzable, PhosVer® 3, TNT	0 - 5.0	50	27427-45†		•	•
Phosphorus, Amino Acid	0 - 30	100	22441-00	•	•	•
Silica, UHR	0 - 200	100	22443-00			•
Silica, HR	0 - 75.0	100	24296-00			•
Silica, LR	0 - 1.6	100	24593-00			•
Sulfate (USEPA)	0 - 70	100	21067-69	•	•	•
Sulfate (AccuVac®) (USEPA)	0 - 70	25	25090-25	•	•	•
Sulfate, UniCell™ †††	40 - 150	23	HCT 125			•
Sulfate, UniCell™ †††	150 - 900	23	HCT 126			•
Sulfide (USEPA)	0 - 0.7	100	22445-00		•	•
Suspended Solids	0 - 750	—	—		•	•
Tannin and Lignin	0 - 9.0	100	22446-00		•	•
Total Organic Carbon, HR	100 - 700	50	27604-45†		•	•
Total Organic Carbon, MR	15 - 150	50	28159-45†		•	•
Total Organic Carbon, LR	0 - 20.0	50	27603-45†		•	•
ToxTrak™ Toxicity	% inhibition	100	25972-00		•	•
Triazole	0 - 15	100	21412-99		•	•
Turbidity	1 - 1000 FAU	—	—	•	•	•
Volatile Acids	0 - 2800	90	22447-00	•	•	•
Zinc (USEPA)**	0 - 3.0	100	24293-00		•	•

*mg/L unless noted otherwise.

**Requires digestion.

***Requires distillation.

HR: High Range MR: Mid Range LR: Low Range UHR: Ultra High Range

USEPA: USEPA accepted or approved AV: AccuVac TNT: Test 'N Tube™

†Vial test requires digestion; order COD Reactor or the DRB 100 Reactor separately.

††UniCell™ metals tests require use of the Metal Prep Set HCT 200 and digestion with DRB 100 Reactor or COD Reactor, all ordered separately, for "total" metal reading.

†††User-installed method.

CEL/800

Series Portable Laboratories

DR/800 Series Colorimeters are available in a wide selection of rugged CEL*/800 Portable Laboratories designed to provide complete field analysis capabilities. Choose one of our fully configured application-specific portable labs or design and outfit your own custom version. Either way, you'll have the ability to perform all the tests you require, quickly and easily.

The heart of all CEL/800 Laboratories is a DR/800 Series Colorimeter with two sample cells, 16-mm COD/TNT/*UniCell*™ adapter, and illustrated instrument and procedure manuals. Preconfigured labs also include complete reagent sets and all necessary apparatus. Many labs include additional instrumentation to expand your testing capabilities. CEL/800 Portable Labs are housed in durable carrying cases designed to accommodate all equipment comfortably, and to protect and organize the contents.

*Colorimeter Environmental Laboratory

Application-Specific CELs Meet Many Needs

You can choose a CEL/800 Series Lab that has been tailored to the testing requirements associated with your specific application. Preconfigured CELs contain the appropriate instruments, reagents, equipment and apparatus to perform the tests you need, with room to add optional items. Application-specific CELs are detailed on the following pages.



*Colorimeter Environmental Laboratory

Additional Instrumentation Expands Your Testing Capabilities


Many CEL/800 Portable Laboratories include, or provide room for, additional instruments that extend your field testing capabilities. With a fully configured portable laboratory, you can accommodate demanding test requirements across town, across the country, or around the world.

Design Your Own CEL for Maximum Efficiency

You can also choose to configure your own CEL/800 Portable Laboratory. Start with a lab that includes a full instrumentation set (available as an option under the listing for our all-purpose CEL/890 Advanced Portable Laboratory) and add the reagents you will need. Or, start with just the DR/800 Series Colorimeter of your choice (see reagent listings on pages 6-7 for individual instrument capabilities). Add a rugged case, instrumentation, equipment, and specific reagent sets you require.

sension™1 Portable pH/mV/Temperature Meter (Cat. No. 51700-10)



The compact, battery-operated sension™1 measures pH, temperature and millivolt potential. Supplied with a choice of Platinum Series Electrodes, the sension™1 is a reliable, inexpensive meter that responds quickly to the electrode signal. 


pH Range/Resolution:
-2.00 to 19.99/0.1,
0.01, 0.001 (selectable)

Millivolt Range/Resolution:
±2000 mV/0.1mV

Temperature Range:
-10.0 to 110.0°C (-50 to 230°F)

sension™5 Portable Conductivity/TDS Meter (Cat. No. 51800-10)



The hand-held sension™5 features a wide measurement range to meet most testing requirements, storage and download capabilities, and an optional docking station, which also converts your battery-powered meter to AC power. 

Conductivity Range/Resolution: 0 to 199.9 µS/cm; 200 to 1999 µS/cm;
2 to 19.99 mS/cm; 20 to 199.9 mS/cm


Salinity Range/Resolution:
0 to 42 g/L (ppt)

TDS Range/Resolution:
0 to 50,000 mg/L as NaCl

Temperature Range: -10 to 110.0°C

Pocket Turbidimeter™ Analysis System (Cat. No. 52600-00)



Our portable Pocket Turbidimeter™ offers rugged construction and simple operation, and is ideal for quick spot checks. The instrument's 880 nm LED light source provides long life and excellent performance, even with colored samples. 

Measurement Range/Resolution:
0 to 400 NTU/≤1 NTU


Digital Titrator (Cat. No. 16900-01)



Fitted with interchangeable cartridges of specific normality titrants, the Digital Titrator is a precise dispensing device that offers fast, economical field titrations.

Pocket Pal™ Testers



Now IP67 rated (waterproof and dust-proof). Designed for on-the-spot use, Pocket Pal™ Testers offer quick results and a sharp, easy-to-read digital display. These rugged and affordable instruments are ideal companions to your portable laboratory. 

Temperature Pocket Pal Tester (Cat. No. 44450-01): -15 to 170°C

TDS Pocket Pal Tester (Cat. No. 44400-01): 10 to 1990 mg/L

pH Pocket Pal Tester (Cat. No. 44350-01): 0 to 14 pH

CEL Portable Laboratory Carrying Case (Cat. No. 49430-00)

Design your own CEL, and you'll fit everything comfortably and securely in our sturdy, portable lab carrying case. With ample room for your DR/800 Series Colorimeter, accessories, manual, reagent sets and apparatus, the case ensures your lab has safe storage and secure transport to any work site.

CEL/800

Series Portable Laboratories



CEL/890 Advanced Portable Laboratory

This versatile portable laboratory will meet your most demanding needs. It includes five instruments and reagent sets for 26 parameters. You can also custom-design your portable laboratory: Specify the laboratory without reagents, and select only the reagents you require.

Parameter	Range	No. of Tests
Acidity (as CaCO ₃)	10 - 4000 mg/L	100
Alkalinity (as CaCO ₃)	10 - 4000 mg/L	100
Ammonia, LR (as N)	0 - 0.50 mg/L	100
Carbon Dioxide	10 - 1000 mg/L	100
Chloride	10 - 8000 mg/L	100
Chlorine, free	0 - 2.00 mg/L	100
Chlorine, total	0 - 2.00 mg/L	100
Chlorine Dioxide	0 - 50.0 mg/L	-
Conductivity/TDS	sensiON™5	-
Color	0 - 500 units	-
Copper	0 - 5.00 mg/L	100
Hardness (as CaCO ₃)	10 - 4000 mg/L	100
Iron, total	0 - 3.00 mg/L	100
Manganese, HR	0 - 20.0 mg/L	100
Nitrate	0 - 30.0 mg/L	100
Nitrite (as N)	0 - 0.350 mg/L	100
Oxygen, dissolved	0 - 15.0 mg/L	25
pH	sensiON™1	-
Phosphate	0 - 2.50 mg/L	100
Silica, LR	0 - 1.60 mg/L	100
Sulfate	0 - 70 mg/L	100
Sulfide	0 - 0.70 mg/L	100
Suspended Solids	0 - 750 mg/L	-
Temperature	sensiON™1	-
Turbidity	Pocket Turbidimeter	-
Zinc	0 - 3.00 mg/L	100

How To Order

26885-00 CEL/890 Advanced Portable Laboratory with reagents.
Includes the DR/890 Colorimeter, a Pocket Turbidimeter, a sensiON™1 pH/ mV/Temp Meter, a sensiON™5 Conductivity/TDS Meter, a Digital Titrator, illustrated instrument and procedures manuals, reagent sets and all required apparatus in a rugged carrying case. 📦

26886-00 CEL/890 Advanced Portable Laboratory without reagents.
Includes the DR/890 Colorimeter, a Pocket Turbidimeter, a sensiON™1 pH/ mV/Temp Meter, a sensiON™5 Conductivity/TDS Meter, a Digital Titrator, illustrated instrument and procedures manuals, and a rugged carrying case. 📦

CEL/850 Basic Drinking Water Laboratory

Including the most commonly tested parameters for drinking water, the CEL/850 Basic Drinking Water Laboratory offers operators basic analytical capabilities in a single convenient package. Monitor influent, finished product and distribution water quickly and easily. The laboratory includes the sensiON™5 Conductivity/TDS Meter for measuring conductivity and total dissolved solids.

Parameter	Range	No. of Tests
Alkalinity (as CaCO ₃)	5 - 400 mg/L	100
Aluminum	0 - 0.80 mg/L	100
Chlorine, free	0 - 2.00 mg/L	100
Chlorine, total	0 - 2.00 mg/L	100
Conductivity/TDS	sensiON™5	-
Fluoride	0 - 2.00 mg/L	25
Hardness (as CaCO ₃)	20 - 400 mg/L	100
Iron, total	0 - 3.00 mg/L	100
Nitrate	0 - 30.0 mg/L	100
Nitrite (as N)	0 - 0.350 mg/L	100
Nitrogen, Monochloramine and Free Ammonia (as N)	0 - 0.50 mg/L	100
Oxygen, dissolved	0 - 15.0 mg/L	25
pH	6.5 - 8.5 pH	100
Phosphate	0 - 2.50 mg/L	100
Sulfate	0 - 70 mg/L	100
Sulfide	0 - 0.70 mg/L	100
Temperature	sensiON™5	-
Turbidity	1 - 1000 FAU	-

How To Order

26880-00 CEL/850 Basic Drinking Water Laboratory.
Includes the DR/850 Colorimeter, a sensiON™5 Conductivity/TDS Meter, reagent sets, apparatus, and illustrated instrument and procedures manuals in a sturdy field case. 📦

CEL/800

Series Portable Laboratories




MEL/850 Potable Water Laboratory

The MEL/850 Potable Water Laboratory offers field testing for the most common water-quality parameters, plus microbiological testing. The laboratory includes the DR/850 Colorimeter, a TDS Pocket Pal Tester, a Pocket Turbidimeter, a Portable Incubator, and coliform presence/absence testing capabilities.

Parameter	Range	No. of Tests
Ammonia (as N)	0 - 0.50 mg/L	100
Chlorine, free	0 - 2.00 mg/L	100
Chlorine, total	0 - 5.00 mg/L	100
Coliforms, total	P/A	50
<i>E. coli</i>	P/A	50
Nitrate	0 - 30.0 mg/L	100
Nitrite (as N)	0 - 0.350 mg/L	100
pH	6.5 - 8.5 pH	100
Phosphate	0 - 2.50 mg/L	100
Sulfide	0 - 0.70 mg/L	100
TDS	10 - 1990 mg/L	-
Temperature	-10 - 110°C	-
Turbidity	Pocket Turbidimeter	-

How To Order

26888-00 MEL/850 Potable Water Laboratory.

Includes the DR/850 Colorimeter, a TDS Pocket Pal Tester, a Pocket Turbidimeter, a Portable Incubator, reagent sets, apparatus, and illustrated instrument and procedures manuals in a sturdy field case. 

*Microbiology Environmental Laboratory


CEL/890 Advanced Drinking Water Laboratory

The CEL/890 Advanced Drinking Water Laboratory provides complete field capabilities, with instrumentation and tests that cover every major drinking water parameter. The laboratory includes a sensION™1 pH/mV/Temp Meter, a sensION™5 Conductivity/TDS Meter, and a Digital Titrator. The DR/890 Colorimeter allows the addition of many optional parameters.

Parameter	Range	No. of Tests
Alkalinity (as CaCO ₃)	10 - 4000 mg/L	100
Aluminum	0 - 0.80 mg/L	100
Chlorine Dioxide	0 - 50.0 mg/L	-
Chlorine, free	0 - 2.00 mg/L	100
Chlorine, free	0 - 5.00 mg/L	100
Chlorine, total	0 - 2.00 mg/L	100
Chlorine, total	0 - 5.00 mg/L	100
Color	0 - 500 units	-
Conductivity/TDS	sensION™5	-
Copper	0 - 5.00 mg/L	100
Fluoride	0 - 2.00 mg/L	25
Hardness (as CaCO ₃)	10 - 4000 mg/L	100
Iron, total	0 - 3.00 mg/L	100
Manganese, LR	0 - 0.700 mg/L	100
Nitrate, HR	0 - 30.0 mg/L	100
Nitrate, LR	0 - 0.50 mg/L	100
Nitrite (as N)	0 - 0.350 mg/L	100
Nitrogen, Monochloramine and Free Ammonia (as N)	0 - 0.50 mg/L	100
Oxygen, dissolved	0 - 15.0 mg/L	25
pH	sensION™1	-
Phosphate	0 - 2.50 mg/L	100
Sulfate	0 - 70.0 mg/L	100
Sulfide	0 - 0.70 mg/L	100
Suspended Solids	0 - 750 mg/L	-
Temperature	sensION™1	-
Turbidity	1 - 1000 FAU	-

How To Order

26881-00 CEL/890 Advanced Drinking Water Laboratory.

Includes the DR/890 Colorimeter, a sensION™1 pH/mV/Temp Meter, a sensION™5 Conductivity/TDS Meter, a Digital Titrator, reagent sets, apparatus, and illustrated instrument and procedures manuals in a sturdy field case. 

CEL/800

Series Portable Laboratories



CEL/890 Advanced Wastewater Laboratory

The Advanced Wastewater Laboratory adds the testing capabilities of the DR/890 Colorimeter, providing an analytical platform well suited to a wide range of additional optional test parameters.

The laboratory includes a sension™1 pH/mV/Temp Meter and a Pocket Turbidimeter.

Parameter	Range	No. of Tests
Aluminum	0 - 0.80 mg/L	100
Ammonia (as N)	0 - 0.50 mg/L	100
Chlorine, total	0 - 2.00 mg/L	100
Chlorine Dioxide	0 - 50.0 mg/L	-
Chlorine, total	0 - 5.00 mg/L	100
Chromium, total	0 - 0.60 mg/L	100
Color	0 - 500 units	-
Copper, HR	0 - 5.00 mg/L	100
Oxygen, dissolved	0 - 15.0 mg/L	25
Iron, total	0 - 3.00 mg/L	100
Manganese, LR	0 - 0.700 mg/L	100
Nitrate	0 - 30.0 mg/L	100
Nitrite (as N)	0 - 0.350 mg/L	100
pH	sension™1	-
Phosphate, LR	0 - 2.50 mg/L	100
Phosphate, HR	0 - 30.00 mg/L	100
Suspended solids	0 - 750 mg/L	-
Temperature	sension™1	-
Turbidity	Pocket Turbidimeter	-
Zinc	0 - 3.00 mg/L	100

How To Order

26883-00 CEL/890 Advanced Wastewater Laboratory.

Includes the DR/890 Colorimeter, a sension™1 pH/mV/Temp Meter, a Pocket Turbidimeter, reagent sets, apparatus, and illustrated instrument and procedures manuals in a sturdy field case.


CEL/820 Basic Wastewater Laboratory

Offering broad analytical capabilities to meet the needs for basic wastewater analysis, the CEL/820 Basic Wastewater Laboratory provides accurate results wherever you need them. Also includes the pH Pocket Pal Tester.

Parameter	Range	No. of Tests
Aluminum	0 - 0.80 mg/L	100
Chlorine, total	0 - 2.00 mg/L	100
Iron, total	0 - 3.00 mg/L	100
Nitrate	0 - 30.0 mg/L	100
Nitrite (as N)	0 - 0.350 mg/L	100
Oxygen, dissolved	0 - 15.0 mg/L	25
pH	0 - 14 pH	-
Phosphate, HR	0 - 30.00 mg/L	100
Temperature	-10 - 110°C	-
Turbidity	1 - 1000 FAU	-

How To Order

26882-00 CEL/820 Basic Wastewater Laboratory.

Includes the DR/820 Colorimeter, a pH Pocket Pal Tester, reagent sets, apparatus, and illustrated instrument and procedures manuals in a sturdy field case. 

CEL/800

Series Portable Laboratories



CEL/890 Professional Water Treatment Laboratory

(for boiler/cooling water applications)

The CEL/890 Professional Water Treatment Laboratory covers the parameters critical to effective treatment and corrosion prevention. The laboratory includes a sensION™1 pH/mV/Temp Meter, a sensION™5 Conductivity/TDS Meter, a Digital Titrator and BART™ (Biological Activity Reaction Test) Biotectors for bacteria detection.

Parameter	Range	No. of Tests
Alkalinity (as CaCO ₃)	10 - 4000 mg/L	100
Bacteria (Iron-Related, Sulfate-Reducing, Slime-Forming)		3 of each
Bromine	0 - 4.50 mg/L	100
Chelant, total (as EDTA)	0 - 1000 mg/L	100
Chloride	10 - 8000 mg/L	100
Chlorine Dioxide	0 - 50.0 mg/L	-
Chlorine, free	0 - 5.00 mg/L	100
Chlorine, free	0 - 2.00 mg/L	100
Chlorine, total	0 - 5.00 mg/L	100
Chlorine, total	0 - 2.00 mg/L	100
Color	0 - 500 units	-
Conductivity/TDS	sensION™5	-
Copper, LR	0 - 210.0 µg/L	100
Hardness (as CaCO ₃)	0 - 4.00 mg/L	100
Hardness (as CaCO ₃)	10 - 4000 mg/L	100
Iron, total	0 - 3.00 mg/L	100
Manganese, HR	0 - 20.0 mg/L	100
Molybdenum, HR	0 - 40.0 mg/L	100
Nitrite, HR (as Nitrite)	0 - 150 mg/L	100
Oxygen, dissolved, LR	0 - 1000 µg/L	25
pH	sensION™1	-
Phosphate, HR	0 - 30.00 mg/L	100
Phosphonates	0 - 125 mg/L	100
Silica, LR	0 - 1.60 mg/L	100
Silica, UHR	0 - 200 mg/L	100
Sulfite	10 - 800 mg/L	100
Suspended Solids	0 - 750 mg/L	-
Temperature	sensION™1	-
Turbidity	1 - 1000 FAU	-
Zinc	0 - 3.00 mg/L	100

How To Order

26884-00 CEL/890 Professional Water Treatment Laboratory. Includes the DR/890 Colorimeter, a sensION™1 pH/mV/Temp Meter, a sensION™5 Conductivity/TDS Meter, a Digital Titrator, BARTs, reagent sets, apparatus, and illustrated instrument and procedures manuals in a sturdy field case. 📦

BART is a trademark of Droycon Bioconcepts, Inc.



CEL/850 Environmental Water Quality Laboratory

Most important environmental tests can be performed using this portable laboratory, which includes everything necessary for determining water quality in the field, with instant results. The laboratory includes the Pocket Turbidimeter and the Digital Titrator.

Parameter	Range	No. of Tests
Acidity (as CaCO ₃)	10 - 4000 mg/L	100
Alkalinity (as CaCO ₃)	10 - 4000 mg/L	100
Ammonia (as NH ₃ -N)	0 - 0.50 mg/L	100
Carbon dioxide	10 - 1000 mg/L	100
Chlorine, free	0 - 2.00 mg/L	100
Chlorine, total	0 - 2.00 mg/L	100
Hardness (as CaCO ₃)	10 - 4000 mg/L	100
Iron, total	0 - 3.00 mg/L	100
Manganese, HR	0 - 20.0 mg/L	100
Nitrate, LR	0 - 0.50 mg/L	100
Nitrite (as N)	0 - 0.350 mg/L	100
Phosphate	0 - 2.50 mg/L	100
Sulfide	0 - 0.70 mg/L	100
Tannin/Lignin	0 - 9.0 mg/L	100
Temperature	-10 - 110°C	-
Turbidity	Pocket Turbidimeter	-
Zinc	0 - 3.00 mg/L	100

How To Order

26878-00 CEL/850 Environmental Water Quality Laboratory. Includes the DR/850 Colorimeter, a Pocket Turbidimeter, a Digital Titrator, reagent sets, apparatus, and illustrated instrument and procedures manuals in a sturdy field case. 📦

CEL/800

Series Portable Laboratories



CEL/820 Water Conditioning Laboratory

The CEL/820 Water Conditioning Laboratory offers the water quality improvement professional a capable DR/820 Colorimeter and all equipment needed to accomplish fast, accurate testing on-site. This laboratory also includes a TDS Pocket Pal Tester.

Parameter	Range	No. of Tests
Alkalinity (as CaCO ₃)	20 - 400 mg/L	100
Chlorine, total	0 - 2.00 mg/L	100
Hardness (as CaCO ₃)	20 - 400 mg/L	100
Iron, total	0 - 3.00 mg/L	100
Manganese, HR	0 - 20.0 mg/L	100
Nitrate, LR	0 - 0.50 mg/L	100
pH	6.5 - 8.5 pH	100
Soap demonstration	-	-
Sulfate	0 - 70 mg/L	100
TDS	10 - 1990 mg/L	-
Temperature	-10 - 110°C	-
Turbidity	1 - 1000 FAU	-
Water Softener	-	-

How To Order

26891-00 CEL/820 *Water Conditioning Laboratory.*

Includes the DR/820 Colorimeter, a TDS Pocket Pal Tester, reagent sets, apparatus, and illustrated instrument and procedures manuals in a sturdy field case. 📦



CEL/850 Professional Water Conditioning Laboratory

The CEL/850 Professional Water Conditioning Laboratory features the DR/850 Colorimeter, affording extended testing capabilities with the option of adding more parameters for specific site or application needs. The laboratory features a sension™1 pH/mV/Temp Meter, a sension™5 Conductivity/TDS Meter, and a Digital Titrator.

Parameter	Range	No. of Tests
Alkalinity (as CaCO ₃)	10 - 4000 mg/L	100
Chloride	10 - 8000 mg/L	100
Chlorine, total	0 - 2.00 mg/L	100
Conductivity/TDS	sension™5	-
Fluoride	0 - 2.00 mg/L	25
Hardness (as CaCO ₃)	10 - 4000 mg/L	100
Iron, total	0 - 3.00 mg/L	100
Manganese, HR	0 - 20.0 mg/L	100
Nitrate, LR	0 - 0.50 mg/L	100
Ozone, MR	0 - 0.75 mg/L	25
pH	sension™1	-
Phosphate	0 - 2.50 mg/L	100
Soap demonstration	-	-
Sulfate	0 - 70 mg/L	100
Tannin	0 - 9.0 mg/L	100
Temperature	sension™1	-
Turbidity	1 - 1000 FAU	-
Water Softener	-	-
Zinc	0 - 3.00 mg/L	100

How To Order

26877-00 CEL/850 *Professional Water Conditioning Laboratory.*

Includes the DR/850 Colorimeter, a sension™1 pH/mV/Temp Meter, a sension™5 Conductivity/TDS Meter, a Digital Titrator, reagent sets, apparatus, and illustrated instrument and procedures manuals in a sturdy field case. 📦

CEL/800

Series Portable Laboratories



CEL/820 *Water, Water Everywhere* Education Laboratory

The CEL/820 *Water, Water Everywhere* Education Laboratory offers one easy-to-store, easy-to-use portable system for a complete range of parameters. Students can easily follow the step-by-step instructions to obtain accurate, high-confidence results. Laboratories include the *Water, Water Everywhere* curriculum, written for use with the DR/820 Colorimeter. It covers the basics of water quality, the water cycle, and more.

Parameter	Range	No. of Tests
Chlorine, total	0 - 2.00 mg/L	100
Iron, total	0 - 3.00 mg/L	10
Nitrate	0 - 30.0 mg/L	25
Oxygen, dissolved	0 - 15.0 mg/L	25
pH	6.5 - 8.5 pH	100
pH (test strips)	0 - 14 pH	100
Temperature	-10 - 110°C	-
Turbidity	1 - 1000 FAU	-

How To Order

26876-00 CEL/820 *Water, Water Everywhere Education Laboratory*. Includes the DR/820 Colorimeter, reagent sets, apparatus, illustrated instrument and procedures manuals, and curriculum in a sturdy field case. 📦



CEL/850 Aquaculture Laboratory

Maintain water quality easily with the portable CEL/850 Aquaculture Laboratory. Fast, on-the-spot results can identify problems early and help determine corrective action. The laboratory includes the sensION™1 pH/mV/Temp Meter, Digital Titrator, and TDS Pocket Pal Tester.

Parameter	Range	No. of Tests
Alkalinity (as CaCO ₃)	10 - 4000 mg/L	100
Ammonia (as N)	0 - 0.50 mg/L	100
Carbon dioxide	10 - 1000 mg/L	100
Chloride	10 - 8000 mg/L	100
Hardness (as CaCO ₃)	10 - 4000 mg/L	100
Iron	0 - 3.00 mg/L	100
Nitrate	0 - 30.0 mg/L	100
Nitrite (as N)	0 - 0.350 mg/L	100
Oxygen, dissolved	0 - 15.0 mg/L	25
pH	sensION™1	-
Phosphate	0 - 2.50 mg/L	100
TDS	10 - 1990 mg/L	-
Temperature	sensION™1	-
Turbidity	1 - 1000 FAU	-

How To Order

26879-00 CEL/850 *Aquaculture Laboratory*. Includes the DR/850 Colorimeter, a sensION™1 pH/mV/Temp Meter, a Digital Titrator, a TDS Pocket Pal Tester, reagent sets, apparatus, and illustrated instrument and procedure manuals in a sturdy field case. 📦

DR/800

Series Colorimeters

High-capability, high-value field instruments with the convenience, reliability and accuracy you expect from Hach.

No other instrument family offers all these features:

- **Capable:** three models (20, 50, or 90 methods) with automatic wavelength selection
- **Preprogrammed:** ready-to-use out of the box
- **Compact:** true hand-held analysis, for use anywhere
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In the plant



In the field



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