

HQd Meters and
IntelliCAL™ Probes

sensION™ Meters and Probes

Buffers and Standard Solutions

DR 5000™ UV-VIS
Spectrophotometer

DR 2800™ Portable
Spectrophotometer

TNTplus™ Chemistries

Colorimeers

Turbidimeters

Hach Digital Titrator

Reagents and Standards

Test Kits and Test Strips

And Many More...
See Inside!

Need assistance
with Lab Products
& Chemistries?
Contact your local
distributor or give me
a call in the USA at
970-669-3050.
I'm here to help.

TONY WALKER



Most Popular Products



See pages 2-5.



See page 23.



See page 14.



See pages 12-13.



Be Right™

NEW PRODUCTS!

HQd Meters and IntelliCAL™ Probes



Secure waterproof connections and color-coded clips

All the information you need on one screen (backlit in low light conditions)

Meters record probe serial numbers, current calibration data, user ID, sample ID, time, and date with every reading

Easy-to-use, menu-driven interface

Great for field use—200+ hours of battery life

HQ40d Dual-Input, Multi-Parameter Digital Meter

One Meter. Choose Your Parameters. pH, Conductivity, or LDO® Luminescent Dissolved Oxygen

Versatile and Expandable

- Save money—Take up to 2 simultaneous measurements of pH, conductivity, and LDO with a single plug-and-play meter.
- No need to predetermine parameters—purchase just the probes you need now, and you're free to expand your parameters later!

Time Savings

- Calibration history is stored in the IntelliCAL probes.
- Change probes without re-calibrating!
- Transfer GLP/ISO data effortlessly to PC or flash stick.
- Meter links results

Confidence in Results

- Meter automatically recognizes type of probe and parameter.
- Automatic check standard routines and calibration reminders ensure accurate results.
- Link sample ID, user ID, and probe serial number to each measurement.

"Calibration is easy, repeatability is very good, and we like the fact that it stores readings that can be tracked by operator and even be downloaded to a printer or PC."

Cindi Rutledge, Plant Operator
Monterey Bay Aquarium

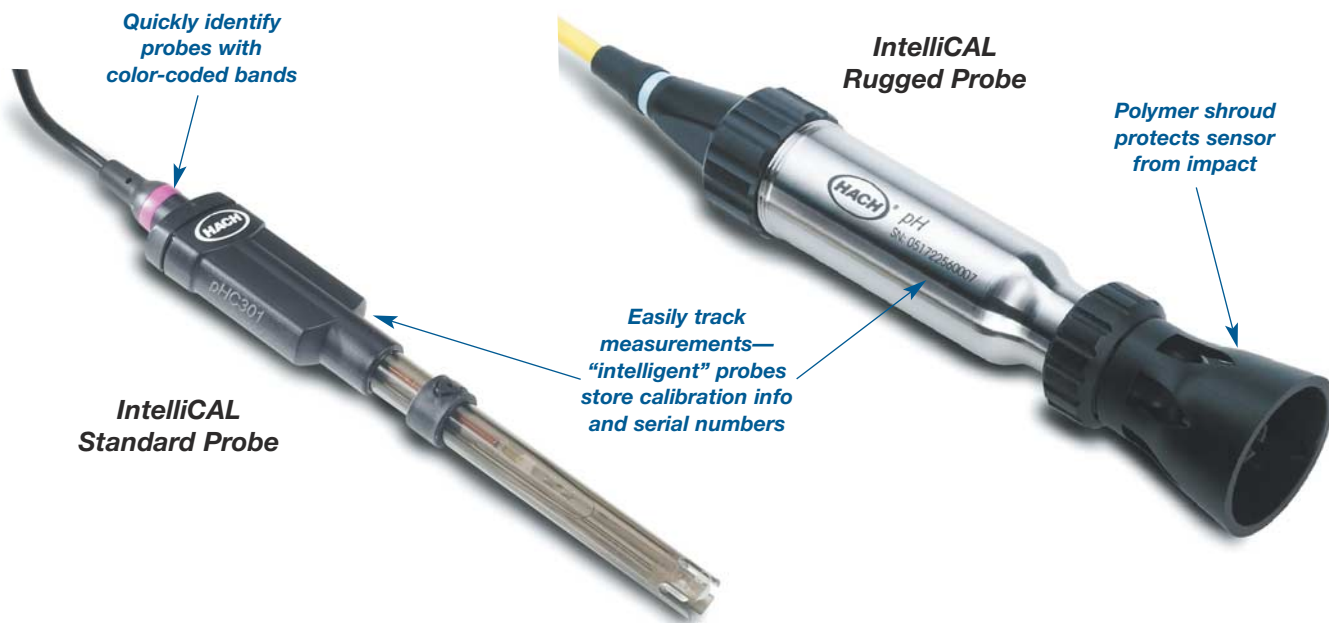


To learn more, go to: www.waterqualitymeters.com



To order, contact your local distributor or call in the USA 970-669-3050

NEW PRODUCTS!



Hach's Luminescent Dissolved Oxygen, LDO sensors feature:

- No more membranes to change
- Less maintenance and calibration
- Fast, accurate readings with datalog



EPA
RECOMMENDED

EPA has recommended Hach LDO® Method 10360 for compliance monitoring.

Hach's breakthrough LDO technology has been approved in numerous states across the nation for compliance monitoring. Visit www.waterqualitymeters.com for more information and to learn if you are in an approved state.



Hqd Meters and IntelliCAL™ Probes

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NEW PRODUCTS!

HQd Meters and IntelliCAL™ Probes

HQ40d Dual-Input Multi-Parameter Meter



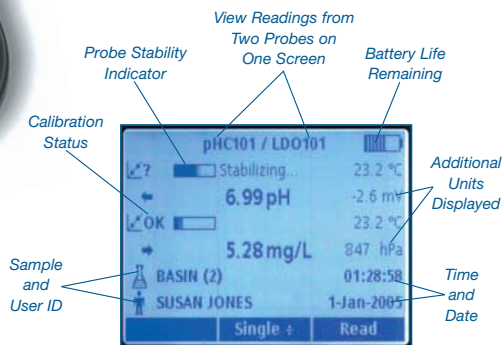
Plug & Play with any Two IntelliCAL Probes!

- One meter measures pH, Conductivity (salinity, TDS, resistivity), and LDO®
- Simultaneously measure two different parameters
- Transfer reporting data (GLP/ISO) effortlessly to PC or flash stick
- HQ40d meter systems include Field Kit, which contains a protective meter glove, 2 probe holders, and sample cups in one organized portable case

HQ40d Meter Only

Product Number	Description
HQ40d53000000	HQ40d Dual-Input, Multi-Parameter Digital Meter

Order meter and probes together, online at: www.hach.com/config



Backlit Dual Display

The Hach HQ40d features three connection ports: 2 ports that allow simultaneous measurement of two different parameters using two different probes, and 1 port for USB and external power.



HQ30d Single-Input Multi-Parameter Meter



Plug & Play with any One IntelliCAL Probe!

- Lighten your load with a single meter to measure either pH, Conductivity (salinity, TDS, resistivity), or LDO® interchangeably
- Quick and easy swapping of parameter/probe without re-calibration

HQ30d Meter Only

Product Number	Description
HQ30d53000000	HQ30d Single-Input, Multi-Parameter Digital Meter

Order meter and probes together, online at: www.hach.com/config

The HQ30d features one probe port for use with any of Hach's IntelliCAL probes and one port for external power.



Dedicated Parameter Meters

HQ11d pH Meter and HQ14d Conductivity Meter

Product Number	Description
HQ11d53000000	HQ11d Digital pH Meter
HQ14d53000000	HQ14d Digital Conductivity Meter

Order meter and probes together, online at: www.hach.com/config

To learn more, go to: www.waterqualitymeters.com



To order, contact your local distributor or call in the USA 970-669-3050

NEW PRODUCTS!

IntelliCAL™ Standard Probes

Accurate, Pre-Calibrated, and Reliable.

Combination pH

Gel-filled, non-refillable standard model pH probe also measures temperature. Waterproof for 24 hours fully immersed. Probe measures 17.8 cm (7") and weighs 45g (1.6 oz.) (probe only).

Cable Length	Product No.
1 meter cable	pHC10101
3 meter cable	pHC10103

Conductivity

4-pole graphite design, standard model probe measures conductivity ($\mu\text{S}/\text{cm}$, mS/cm), salinity, TDS, and temperature. Waterproof for 24 hours fully immersed. Probe measures 17.8 cm (7") and weighs 45g (1.6 oz.) (probe only).

Cable Length	Product No.
1 meter cable	CDC40101
3 meter cable	CDC40103

Refillable pH

Liquid-filled, refillable standard model pH probe also measures temperature. Probe measures 17.8 cm (7") and weighs 45g (1.6 oz.) (probe only).

Cable Length	Product No.
1 meter cable	pHC30101
3 meter cable	pHC30103

Luminescent Dissolved Oxygen (LDO)

Using patented Hach Luminescent Dissolved Oxygen technology, this standard model probe measures dissolved oxygen (mg/L , % saturation) pressure, and temperature. Waterproof for 24 hours fully immersed. Probe measures 17.8 cm (7") and weighs 45g (1.6 oz.) (probe only).

Cable Length	Product No.
1 meter cable	LDO10101
3 meter cable	LDO10103



IntelliCAL™ Rugged Probes

Reliable Measurements in Harsh Environments.

Combination pH

Gel-filled rugged model pH probe also measures temperature. Waterproof for 24 hours fully immersed. Probe measures 21.6cm (8.5") and weighs 0.57kg (1.26 lbs.) (probe only).

Cable Length	Product No.
5 meter cable	pHC10105
10 meter cable	pHC10110
15 meter cable	pHC10115
30 meter cable	pHC10130

Luminescent Dissolved Oxygen (LDO)

Using patented Hach Luminescent Dissolved Oxygen technology, this rugged model probe measures dissolved oxygen (mg/L , % saturation) pressure, and temperature. Waterproof for 24 hours fully immersed. Probe measures 21.6cm (8.5") and weighs 0.57kg (1.26 lbs.) (probe only).

Cable Length	Product No.
5 meter cable	LDO10105
10 meter cable	LDO10110
15 meter cable	LDO10115
30 meter cable	LDO10130

Conductivity

4-pole graphite design, rugged model probe measures conductivity ($\mu\text{S}/\text{cm}$, mS/cm), salinity, TDS, and temperature. Waterproof for 24 hours fully immersed. Probe measures 21.6cm (8.5") and weighs 0.57kg (1.26 lbs.) (probe only).

Cable Length	Product No.
5 meter cable	CDC40105
10 meter cable	CDC40110
15 meter cable	CDC40115
30 meter cable	CDC40130



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To order, contact your local distributor or call in the USA 970-669-3050



Hqd Meters and IntelliCAL™ Probes

MOST POPULAR!

sensION™ Meters and Probes

pH sensION Meters

Basic Portable and Benchtop pH Meters

- 1, 2, or 3 point calibration
- Resolution to 0.1, 0.01, and 0.001, for the right accuracy when you need it
- Fast response to changes in pH; true pH averaging
- sensION3 features RS232 communication to PC or printer
- sensION1 is waterproof (IP67) and floats

Range	Resolution	Accuracy
(pH): -2.00 to 19.99 mV: ±2000 Temperature: -10 to 110°C (-50 to 230°F)	(pH): 0.1; 0.01; 0.001 (selectable) mV: 0.1 mV Temperature: 0.1°C	(pH): ±0.002 mV; ±0.2 mV or ±0.1% of reading (whichever is greater) Temperature: ±0.3°C at -10 to 70°C; ±1.0°C at 70 to 110°C

Prod. No. Description

5170010	sensION1 Portable pH Meter with Platinum pH electrode (replaceable cartridges)
5170011	sensION1 Portable pH Meter with gel-filled electrode (disposable electrode)
5175010	sensION3 Benchtop pH Meter with Platinum pH electrode, 115V
5175011	sensION3 Benchtop pH Meter with Platinum pH electrode, 230V
5175012	sensION3 Benchtop pH Meter with gel-filled electrode, 115V
5175013	sensION3 Benchtop pH Meter with gel-filled electrode, 230V

pH / ISE sensION Meters

Advanced Portable and Benchtop pH / ISE Meters

- Automatic buffer recognition
- Resolution to 0.1, 0.01 and 0.001, for the right accuracy when you need it
- Measures/compensates temperature in °C or °F
- sensION2 is waterproof (IP67) and floats
- Recall/download/print data via built-in RS232 serial ports (sensION4) or via optional docking station (sensION2)
- sensION4 features selectable two-channel operation

Range	Resolution	Accuracy
(pH): -2.000 to 19.999 Concentration: 0.000 to 19900 mV: ±2000 Temperature: -10 to 110°C (-50 to 230°F)	(pH): 0.1; 0.01; 0.001 (selectable) Concentration: 0.1; 0.01; 0.001 (selectable) mV: 0.1 mV Temperature: 0.1°C	(pH): ±0.002 Concentration: ±0.5% of reading mV: ±0.2 mV or ±0.05% of reading (whichever is greater) Temperature: ±0.3°C at -10 to 70°C; ±1.0°C at 70 to 110°C

Prod. No. Description

5172510	sensION2 Portable pH/ISE Meter with Platinum pH electrode
5177510	sensION4 Benchtop pH/ISE Meter with Platinum pH electrode 115V

To view the complete portfolio of sensION meters, including multi-parameter meters, visit www.hach.com.

MOST POPULAR!

Dissolved Oxygen sensION Meters

Portable and Benchtop Dissolved Oxygen Meters

- Quick calibration
- All-in-one 5-pin connector
- Stable resolution to 0.1, 0.01 mg/L; 0.1% saturation
- Recall/download/print data via built-in RS232 serial ports (sensION8) or via optional docking station (sensION6)
- Dissolved Oxygen measurement using polarographic technology (Clark cell)

Range	Resolution	Accuracy
Dissolved Oxygen: 0-20 mg/L (ppm); 2-200% saturation Temperature: 0-50°C	Dissolved Oxygen: 0.01 or 0.1 ppm (mg/L); 0.1% saturation Temperature: 0.1°C	Dissolved Oxygen: ±1% full scale Temperature: ±0.3°C at -10 to 70°C; ±1.0°C at 70 to 110°C

Prod. No.	Description
5185010	sensION6 Dissolved Oxygen Meter with 3 m probe
5455010	sensION8 Benchtop Dissolved Oxygen Meter with electrode, 1-meter (40") cable, 115 V



Conductivity sensION Meters

Portable and Benchtop Conductivity Meters

- Fast response
- Quick single-point calibration
- All-in-one 5-pin connector
- Recall/download/print data via built-in RS232 serial ports (sensION5) or via optional docking station (sensION7)

Range	Resolution	Accuracy
Conductivity: 0 to 199.9 µS/cm; 200 to 1999 µS/cm; 2 to 19.99 mS/cm; 20 to 199.9 mS/cm TDS: 0 to 50,000 mg/L as NaCl Salinity: 0 to 42 g/L (ppt) Temperature: -10.0 to 110.0°C	Conductivity: 0.1 µS; 1µS; 0.01 mS; 0.1 mS TDS: 3 significant digits Salinity: 0.1 g/L (ppt) Temperature: ±0.1°C	Conductivity: ±0.5% of range TDS: ±0.5% of full scale Salinity: ±0.1 ppt (-2 to 35°C) Temperature: ±0.3°C at -10 to 70°C; ±1.0°C at 70 to 110°C

Prod. No.	Description
5180010	sensION5 Conductivity Meter with electrode 1-meter (40") cable
5450010	sensION7 Benchtop Conductivity Meter with electrode, 1-meter (40") cable, 115 V



sensION™ Meters and Probes

To view the complete portfolio of sensION meters,
including multi-parameter meters, visit www.hach.com.

To order, contact your local distributor or call in the USA 970-669-3050



MOST POPULAR!

sensION Electrochemical Probes

	Electrode Type	Range	Slope	Temp. Range	Interferences	Electrode Only
51910 Platinum Series pH Combination (with temperature)						
	Glass Membrane	pH: 0 to 14	58 (±3) mV/decade	Continuous Use: 0 to 45°C (32 to 113°F) Maximum Use: 0 to 100°C (32 to 212°F)	Na ⁺ above pH 12	Product No. 5191000 pH Platinum Series Combination Electrode (use with sensION Meters) Features 5-pin connector. Includes two electrolyte cartridges and a manual. Product No. 5191022 With BNC and DIN connectors. Product No. 5191011 With BNC and 3.5 mm phone connectors.
51915 Platinum Series pH Combination Flat-End						
	Glass Membrane	pH: 0 to 14	58 (±3) mV/decade	Continuous Use: 0 to 45°C (32 to 113°F) Maximum Use: 0 to 80°C (32 to 176°F)	Na ⁺ above pH 12	Product No. 5191500 pH Platinum Series Combination Flat-End Electrode (use with ALL Hach meters) Features BNC connector. Includes two electrolyte cartridges and a manual
51935 pH Combination (with temperature)						
	Glass Membrane	pH: 0 to 14	58 (±3) mV/decade at 25°C	Continuous Use: 0 to 45°C (32 to 113°F) Maximum Use: 0 to 100°C (32 to 212°F)	Na ⁺ above pH 12	Product No. 5193500 pH Gel-Filled Combination Electrode (use with sensION Meters) Features 5-pin connector. Includes a manual. Product No. 5193522 With BNC and DIN connectors. Product No. 5193511 With BNC and 3.5 mm phone connectors.
51940 Refillable Combination Electrode (with temperature)						
	Glass Membrane	pH: 0 to 14	58 (±3) mV/decade at 25°C	Continuous Use: 0 to 45°C (32 to 113°F) Maximum Use: 0 to 100°C (32 to 212°F)	Na ⁺ above pH 12	Product No. 5194000 Refillable Combination Electrode (use with sensION Meters) Features 5-pin connector. Includes a manual. Product No. 5194022 With BNC and DIN connectors. Product No. 5194011 With BNC and 3.5 mm phone connectors.
51975 Conductivity Probe						
	Epoxy	0.1 µS-200 mS 0.5 (cm-1) cell constant	N/A	-10 to 110°C	N/A	Product No. 5197500 (1 m Cable) Product No. 5197503 (3 m Cable) Conductivity Probe with 5-Pin circular connector.
51970 Dissolved Oxygen Probe						
	Clark-type polarographic	0 to 20 mg/L or 0 to 200% saturation	N/A	0 to 50°C	N/A	Product No. 5197000 (1 m Cable) Product No. 5197003 (3 m Cable) Product No. 5197015 (15 m Cable) Dissolved Oxygen Probe with 5-Pin circular connector.
51980 Temperature Probe						
	Thermistor	N/A	N/A	0 to 80°C	N/A	Product No. 5198000 Temperature Probe (sensION Meter) with 5-pin connector. Product No. 5198022 Temperature Probe (EC Meter) with DIN Connector Product No. 5198011 Temperature Probe (Hach One Meter) with 3.5 mm phone connector

To view the complete portfolio of sensION probes, including ammonia, fluoride, nitrate, ORP, and sodium, visit www.hach.com.

MOST POPULAR!

sensION Accessories



*Low-Ionic-Strength (LIS)
Sample Chamber
Product No. 5189900*



*Electrode Washer
Product No. 2704700*



*Electrode stands come with
and without stirrers
Product No. 45300XX*



*Probe Holder
Product No. 5467100*



*Docking Station
Product No. 51875XX*



*Kyoline Brand Thermal Printer
Product No. A70P021
(Pen shown for scale.)*

Prod. No.	Description
5197100	BOD Accessory Kit
5189900	LIS Sample Chamber
2089400	Electrode Rack
2089500	Electrode Support Clamp
2615700	Electrode Holder, Flexible Arm
2089300	Electrode Holder, Universal
4531500	Extra Stir Bar
2704700	Electrode Washer
5187501	Docking Stations 115V
5187502	Docking Stations 230V
4812900	Computer Serial Cable
5467100	Probe Holder

Prod. No.	Description
4530000	Electrode Stand
4530001	Electrode Stand with Stirrer 115V
5192900	Soaker Bottle for pH Electrode
1938004	Replacement batteries, AA, pk/4
5190400	Soft-Sided Carrying Case
5190300	Hard-Sided Carrying Case
5191700	sensION156 Hard-Sided Carrying Case
4966500	HachLink™ Software
A70P021	Kyoline Brand Thermal Printer with cable, 115 V
A70P025	Thermal Paper for Kyoline Printer, pk/10 rolls

sensION™ Meters and Probes

ISE Calibration Standards

Hach's high-quality, low-cost standards for ISE calibrations are accurate and stable to ensure that your ion measurements are as precise as possible. Hach standards are available in liquid form, in a variety of concentrations and quantities.

Parameter	Concentration	Quantity	Prod. No.
Ammonia	100 mg/L	500 mL	2406549
Calcium	10 mg/L	500 mL	2305449
	100 mg/L	500 mL	4457649
	1000 mg/L	500 mL	2240349
Chloride	100 mg/L	1 L	2370853
	1000 mg/L	500 mL	18349
Fluoride	1 mg/L	500 mL	29149
	10 mg/L	500 mL	35949
Nitrate	1 mg/L	500 mL	204649
	10 mg/L	500 mL	30749
	100 mg/L	500 mL	194749
Potassium	10 mg/L	500 mL	2351849
	100 mg/L	500 mL	2351749
Sodium	100 mg/L	1 L	2318153
	1000 mg/L	500 mL	1474949

Singlet™ Solution Packs

Singlet single-use standard solutions are ideal for on-site analysis, eliminating the need to prepare standardized buffer solutions for pH meter calibration. You can have fresh pH buffer solutions without having to purchase and carry deionized or demineralized water. The convenient foil-pouch packaging maintains freshness, and keeps the solutions contaminant-free and ready to travel with you anywhere.

Item	Quantity	Prod. No.
pH 7.00 and pH 10.01 Buffer Solution	pk/10 of ea.	2769820
pH 4.01 and pH 7.00 Buffer Solution	pk/10 of ea.	2769920
pH 4.01 Buffer Solution	pk/20	2770020
pH 7.00 Buffer Solution	pk/20	2770120
pH 10.01 Buffer Solution	pk/20	2770220



Calibration Buffers

Hach standard calibration buffers are available in convenient, unit-dose powder pillows or color-coded liquids. Powder pillows assure freshness and eliminate the possibility of contamination. They are recommended for automatic calibration. Simply open the pillow and add the contents to 50 mL of deionized or demineralized water. Both liquid and powder buffers assure accuracy (± 0.02 pH units) and are NIST traceable.

pH Buffer Pillows

Buffers with pH values of 4.01, 7.00, and 10.01 are color-coded for added convenience. All carry the DOT code ΔNR and are for 50-mL solution volumes. pH is ± 0.02 at 25°C.

pH	Quantity	Prod. No.
Color-Coded		
4.01 (Red)	15	2226995
	50	2226966
	250	2226964
7.00 (Yellow)	15	2227095
	50	2227066
	250	2227064
10.01 (Blue)	15	2227195
	50	2227166
	250	2227164
4.01 (Red) 7.00 (Yellow)	10 of each	2299264
Colorless		
5.00	15	1409795
6.00	50	1405566
6.86	15	1409895
8.00	15	1407995
9.00	50	1410766
pH Storage Solution	500 mL	2756549

pH Buffer Solutions

pH is ± 0.02 at 25°C.

Item	Unit	Prod. No.
pH 4.01 Color-Coded Red (NIST)		
	500 mL	2283449
	4 L	2283456
	20 L	2283461
pH 7.00 Color-Coded Yellow (NIST)		
	500 mL	2283549
	4 L	2283556
	20 L	2283561
pH 10.01 Color-Coded Blue (NIST)		
	500 mL	2283649
	4 L	2283656
	20 L	2283661
pH 4.01 Colorless (NIST)		
	500 mL	1222349
	4 L	1222356
pH 7.00 Colorless (NIST)		
	500 mL	1222249
	4 L	1222256
pH 10.01 Colorless (NIST)		
	500 mL	1222149
	4 L	1222156

MOST POPULAR!

Standard Solutions and Reagents

Prod. No. Description

BOD NUTRIENTS AND SEED INOCULUM

1416066	BOD Nutrient Buffer Pillows, prepares 300 mL, 50/pk
1486166	BOD Nutrient Buffer Pillows, prepares 3 L, 50/pk
1486266	BOD Nutrient Buffer Pillows, prepares 6 L, 50/pk
1486398	BOD Nutrient Buffer Pillows, prepares 19 L, 25/pk
253335	Formula 2533™ Nitrification Inhibitor, 35 g
253334	Formula 2533™ Nitrification Inhibitor, 500 g
2918700	BOD Seed Inoculum, 50 capsules, Polyseed

CHLORINE, TOTAL BACK TITRATION METHOD REAGENT (FOR AUTOCAT™ 9000)

2333353	Iodine standard, 0.0282 N, 1000 mL
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CHLORINE DIOXIDE/CHLORITE METHOD REAGENTS (FOR AUTOCAT™ 9000)

141832	Hydrochloric acid std. solution, 2.5 N, 100 mL
16726H	Potassium Iodide, ACS, 100 g

CONDUCTIVITY STANDARDS

2307542	85.47 mg/L NaCl, 180 µS/cm, 100 mL
1440042	491 mg/L NaCl, 1000 µS/cm, 100 mL
2307442	10,246 mg/L NaCl, 18,000 µS/cm, 100 mL

FLUORIDE IONIC STRENGTH ADJUSTOR

258901	Powder, 454 g
258999	Powder Pillows, 100
2829017	Solution, 3.78 L

PLATINUM SERIES PH PROBE KCL GEL CARTRIDGE

2546902	KCl Reference Electrolyte Gel, cartridges 2/pk
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Prod. No. Description

FLUORIDE STANDARD SOLUTIONS AS F (NIST)

40505	0.5 mg/L, 500 mL
29149	1.0 mg/L, 500 mL
29153	1.0 mg/L, 1 L
40520	2.0 mg/L, 500 mL
2797149	5.0 mg/L 500 mL
35949	10 mg/L, 500 mL
23249	100 mg/L, 500 mL

NITROGEN-AMMONIA STANDARD SOLUTIONS AS NH₃-N

189149	1 mg/L, 500 mL
15349	10 mg/L, 500 mL
1479120	50 mg/L, 2-mL PourRite™ Ampule, 20
1479110	50 mg/L, 10-mL Voluette® Ampule, 16
2406549	100 mg/L, 500 mL
2128420	150 mg/L, 2-mL PourRite™ Ampule, 20
2109110	160 mg/L, 10-mL Voluette® Ampule, 16

NITROGEN-NITRATE STANDARD SOLUTIONS AS NO₃-N (NIST)

204649	1 mg/L as NO ₃ -N, 4.43 mg/L as NO ₃ ⁻ , 500 mL
2557810	5 mg/L, 10-mL Voluette® Ampule, 16
30749	10 mg/L, 44.3 mg/L as NO ₃ ⁻ , 500 mL
2415132	15 mg/L, 100 tests MDB
194749	100 mg/L as NO ₃ -N, 443 mg/L as NO ₃ ⁻ , 500 mL
2557710	250 mg/L, 10-mL Voluette® Ampule, 16
1426010	500 mg/L, 10-mL Voluette® Ampule, 16
1279249	1000 mg/L as NO ₃ -N; 4430 mg/L as NO ₃ ⁻ , 500 mL

SODIUM ELECTRODE STORAGE SOLUTION

4451659	50 mL
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SODIUM STANDARD SOLUTION AS Na

2318153	100 mg/L, 1 L (NIST)
1474949	1000 mg/L, 500 mL (NIST)



Hach Buffers for pH Calibration (NIST Traceable)

Prod. No. Description

2283461	Buffer Solution, pH 4.01 (red), 20 liter (NIST)
2283561	Buffer Solution, pH 7.00 (yellow), 20 liter (NIST)
2283661	Buffer Solution, pH 10.01 (blue), 20 liter (NIST)



NEW PRODUCTS!

DR 5000™ UV-VIS Spectrophotometer

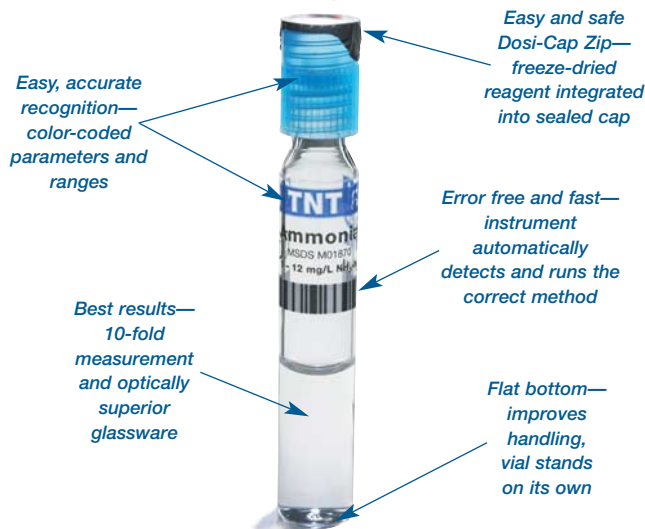
Automatic method detection increases productivity.



- More than 250 pre-programmed water analysis methods
- Automatic method detection when using new TNTplus reagents (see page 14)—the DR 5000 spectrophotometer automatically reads the bar code, identifies the appropriate method and takes the measurement
- Automatic 10-fold measurement and averaging increases accuracy and confidence when using TNTplus chemistries
- Drift-free measurement
- Large touch screen display
- UV methods (Organics/Nitrate)
- Pour-Thru™ methods for high volume analysis and trace level measurements
- Accepts 7 cell types with single Universal Sample Cell Holder
- High speed wavelength scanning
- USB data transfer capability

TNTplus™ bar-coded chemistries

See page 14.



View online demonstration of the DR 5000 and TNTplus chemistries at www.hach.com/DR5Kflash.

Prod. No.	Description
DR5000-01	DR 5000 UV-Vis Spectrophotometer 115 Vac; includes multi-cell holder, instrument manual, power cord (115V), 1-inch matched glass sample cells, 1-cm matched quartz sample cells.

Specifications*

Operating Mode
Transmittance (%), Absorbance and Concentration

Source Lamp
Tungsten (visible) and Deuterium (UV)

Wavelength Range
190 - 1100 nm

Wavelength Accuracy
±1 nm in Wavelength Range 200-900 nm

Wavelength Resolution
0.1 nm

Wavelength Calibration
Automatic

Wavelength Selection
Automatic, based on method selection

Scanning Speed
One complete scan per minute in 1 nm steps

Spectral Bandwidth
2 nm

Photometric Range
±3.0 A in the Wavelength Range 200-900 nm

Photometric Accuracy
5 mA at 0.0-0.5 A; 1% at 0.50-2.0 A

Photometric Linearity
< 0.5% at 2 A; < = 1% at > 2 A

Stray Light
KI-solution at 220 nm > 3.3 Abs

Sample Cells Compatibility
1x1, 2x1, 5x1, 10x1 cm; 13 mm round and 16 mm round; AccuVac; 1 inch round; Pour Thru Cells, 1 inch square

Operating Requirements
10 to 40°C (50 to 104°F), max. 90% relative humidity (non-condensing)

Storage Requirements
-25 to 60°C (-13 to 140 °F) max.
80% relative humidity (non-condensing)

Languages

English, French, Spanish, German, and Italian, Portuguese, Dutch, Swedish, Polish, Danish, Hungarian, Czech, Slovak and Romanian (Please contact your Hach representative for availability of additional languages.)

Main Connection

100 - 120 V~; 200 - 240 V~; 50/60 Hz; automatic changeover

Interfaces

USB 1.1 Enclosure Rating IP 32

Dimensions

49.5 x 45 x 20 cm (19.5 x 17.8 x 8 in.)

Weight

15.5 kg (34.2 lbs)

**Subject to change without notice.*



NEW PRODUCTS!

New portable spectrophotometer offers a wide range of pre-programmed water analysis methods, all with a small footprint.

- More than 240 pre-programmed water testing methods
- Automatic method detection when using new TNTplus reagents—spectrophotometer automatically reads the bar code, identifies the appropriate method and takes the measurement (See page 14 for more information on TNTplus reagents.)
- Small footprint
- Large touch screen display
- Battery (optional) and line power make this flexible instrument great for the field and the lab
- USB data transfer capability



Prod. No. Description
DR2800-01 DR 2800 Spectrophotometer
 Includes: DR 2800 Spectrophotometer
 Adapters (3): for 10 mm rectangular cuvettes, for Multi-pathlength cell and Pour-Thru cell Kit, and for 1" round cuvettes and AccuVac
 Protective Cover for storing adapters
 TNTplus Sample Set (U.S. only)
 1 matched pair of 1" square glass sample cells
 Universal power supply 100-240V, 47-63Hz with exchangeable plug adapters for EU, GB, US, China
 Dust Cover

DR2800-01B Same as above with lithium battery

5839700 DR 2800 Carrying Case
 Blue plastic case with handle. Designed to hold the DR 2800, protective cover and adapters, 1" square sample cells, 2 pipets, and power supply. Contains extra space for adding your test reagents.
 Case size: 17.5 x 10.25 x 8.5" (W x D x H)



*Prod. No. 5839700 DR 2800 Carrying Case
 Contents not included.*

Specifications*

Wavelength Range
 340 to 900 nm

Spectral Bandwidth
 5 nm

Wavelength Accuracy
 ±1.5 nm

Pre-programmed Water Analysis Methods
 > 240

Data Logging
 500 points

User-entered Calibrations
 50

Scanning
 No

Automatic Method Recognition
 Yes, with TNTplus vials

10-fold Measurement
 Yes, with TNTplus vials

Display
 Backlit Grayscale LCD Touch Screen

External Outputs
 USB

Power
 Line/Battery (Optional)

Languages

English, French, Spanish, German, and Italian, Portuguese, Dutch, Swedish, Polish, Danish, Hungarian, Czech, Slovak and Romanian (Please contact your Hach representative for availability of additional languages.)

Dimensions

21.6 x 33.0 x 13.2 cm (8.5 x 13.0 x 5.2")

**Subject to change without notice.*

To order, contact your local distributor or call in the USA 970-669-3050



DR 2800™ Portable Spectrophotometer

NEW PRODUCTS!

- Bar-coded vials—automatically identifies test parameter, range and method
- New vial design with superior optical glassware, color-coded caps and flat bottom
- Dosi-Cap Zip reagent delivery provides ease of use and eliminates hazardous chemistry handling
- Color coded packaging, pictograms, and instructions in multiple languages simplify testing
- No blank necessary
- Many tests are EPA approved—see table below



For use with Hach DR 5000 and DR 2800 Spectrophotometers only.

Description	Range	Instrument	EPA Approved	Digestion Required	# Tests	Product Number
Aluminum TNTplus, Chromazurol S	0.02-0.50 mg/L Al	DR 5000, DR 2800			24	TNT848
Ammonia TNTplus, ULR	0.015-2.00 mg/L NH ₃ -N	DR 5000, DR 2800			25	TNT830
Ammonia TNTplus, LR	1-12 mg/L NH ₃ -N	DR 5000, DR 2800			25	TNT831
Ammonia TNTplus, HR	2-47 mg/L NH ₃ -N	DR 5000, DR 2800			25	TNT832
Cadmium TNTplus*, Cadion Method	0.02-0.3 mg/L	DR 5000, DR 2800			25	TNT852
Chromium, Hexavalent and Total TNTplus	0.03-1.00 mg/L Cr	DR 5000, DR 2800	Yes ^{††}		25	TNT854
COD TNTplus, ULR PK/24	1.0-60.0 mg/L	DR 5000, DR 2800		Yes	24	TNT820
COD TNTplus, LR PK/25	3-150 mg/L	DR 5000, DR 2800	Yes	Yes	25	TNT821
COD TNTplus, LR PK/150	3-150 mg/L	DR 5000, DR 2800	Yes	Yes	150	TNT82106
COD TNTplus, HR PK/25	20-1,500 mg/L	DR 5000, DR 2800	Yes	Yes	25	TNT822
COD TNTplus, HR PK/150	20-1,500 mg/L	DR 5000, DR 2800	Yes	Yes	150	TNT82206
COD TNTplus, UHR PK/25	200-15,000 mg/L	DR 5000, DR 2800		Yes	25	TNT823
Lead TNTplus*, PAR Method	0.1-2.0 mg/L Pb	DR 5000, DR 2800			25	TNT850
Nickel TNTplus*, Dimethylglyoxime Method	0.1-6.0 mg/L Ni	DR 5000, DR 2800			25	TNT856
Nitrate, Nitrogen TNTplus, LR	0.2-13.5 mg/L NO ₃ ⁻ -N	DR 5000, DR 2800			25	TNT835
Nitrate, Nitrogen TNTplus, HR	5-35 mg/L NO ₃ ⁻ -N	DR 5000, DR 2800			25	TNT836
Nitrite TNTplus	0.015-0.60 mg/L NO ₂ ⁻ -N	DR 5000, DR 2800	Yes [†]		25	TNT839
Nitrogen, Total TNTplus, LR	1-16 mg/L N	DR 5000, DR 2800		Yes	25	TNT826
Nitrogen, Total TNTplus, HR	5-40 mg/L N	DR 5000, DR 2800		Yes	25	TNT827
Nitrogen, Total TNTplus, UHR	20-100 mg/L N	DR 5000, DR 2800		Yes	25	TNT828
Phosphorus, Reactive TNTplus	1.6-30 mg/L P (5-90 mg/L PO ₄)	DR 5000, DR 2800			25	TNT846
Phosphorus, Reactive and Total TNTplus, LR	0.05-1.5 mg/L P (0.15-4.5 mg/L PO ₄)	DR 5000, DR 2800	Yes	Yes for Total	25	TNT843
Phosphorus, Reactive and Total TNTplus, HR	0.5-5 mg/L P (1.5-15.0 mg/L PO ₄)	DR 5000, DR 2800	Yes	Yes for Total	25	TNT844
Phosphorus, Reactive and Total TNTplus, UHR	2-20 mg/L P (6-60 mg/L PO ₄)	DR 5000, DR 2800	Yes	Yes for Total	25	TNT845

*As listed, test determines soluble metal. Order Metals Prep Set TNT890 to determine total metal. [†]EPA equivalent. ^{††}EPA approved for Cr⁶⁺ only.

TNTplus NUTRIENTS REAGENT SETS FOR USE WITH HACH DR 5000 AND DR 2800 SPECTROPHOTOMETERS

Nutrients Basic Reagent Set, TNTplus 2925000*
 Bar-coded reagents for use with DR 5000 and DR 2800 Spectrophotometers includes 25 tests of each of the following:
 • Nitrogen, Total, LR • Phosphorus, Total and Reactive (ortho), LR

Nutrients Advanced Reagent Set, TNTplus 2925100*
 Bar-coded reagents for use with DR 5000 and DR 2800 Spectrophotometers includes 25 tests of each of the following:
 • Nitrogen, Total, LR • Nitrogen, Ammonia, LR • Nitrogen, Nitrate, LR • Nitrogen, Nitrite, LR • Phosphorus, Total and Reactive (ortho), LR

* Requires Digestion. Use DRB200 Reactor (Prod. No. DRB200-05) with 13 mm vial wells or use TNTplus Adaptor Sleeves 16 mm to 13 mm (Prod. No. 2895805) to convert from a 16 mm reactor vial well to 13 mm vial well.

NEW!

Single Channel Pipet

Hach's new variable volume single-channel, air-displacement pipets feature robust design, comfortable ergonomics, slim-line tip ejection, and single-handed operation. Outstanding accuracy with adjustments in 50 µL increments (0.05 mL). Ideal for use with Hach TNTplus™ reagents. Supplied with calibration tool.



Prod. No.	Description	Unit
BBP078	0.2-1.0 mL Pipet	each
BBP065	1.0-5.0 mL Pipet	each
LZP320	One each of BBP078 and BBP065, plus one box (ea) of tips	pk
BBP079	Pipet Tip for BBP078	100/pack
BBP068	Pipet Tip for BBP065	75/pack



MOST POPULAR!

- Easy-to-use software, preprogrammed methods, and prepared reagents
- Datalogging capabilities
- Readout in concentration, ABS, and %T

Choose from 3 Models:

DR/820

Engineered to test for more than 20 parameters, this colorimeter includes all the features identified above. Ideal for testing programs that focus on basic water quality constituents such as chlorine, iron, hardness, dissolved oxygen, and sulfate.

DR/850

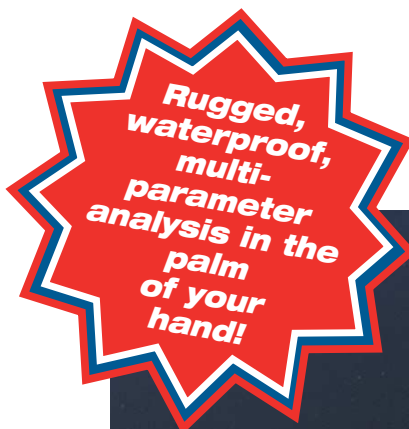
This colorimeter tests for more than 50 parameters and includes all the advanced capabilities listed above.

DR/890

As the most complete, most capable of all the DR/800 Series, this colorimeter tests for more than 90 parameters, from aluminum to zinc. Use it for testing natural waters, industrial waters, and everything in between!



The optional carrying case provides room for the instrument, all accessories, and additional reagent sets.



Each DR/800 Series Colorimeter comes with two sample cells marked at 10, 20 and 25 mL; 16-mm COD/Test 'N Tube™ adapter, 4 AA alkaline batteries, and illustrated instrument and procedure manuals. European CE mark.

<u>Prod. No.</u>	<u>Description</u>
4844000	DR/820 Colorimeter (approx. 20 parameters)
4845000	DR/850 Colorimeter (approx. 50 parameters)
4847000	DR/890 Colorimeter (approx. 90 parameters)

OPTIONAL ACCESSORIES

4942500	Instrument Carrying Case, hard-sided (shown)
2722000	Instrument Carrying Case, soft-sided



DR/800 Series Colorimeters

MOST POPULAR!

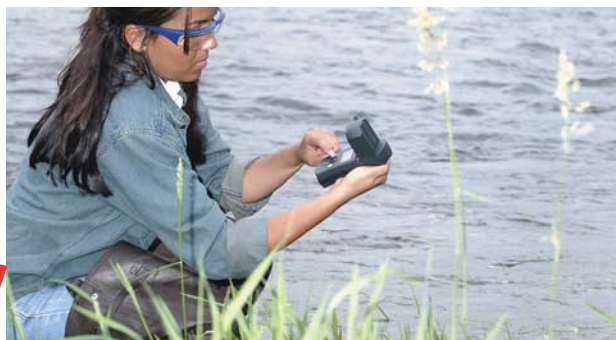
Pocket Colorimeter™ II



Portable, rugged, waterproof analysis.

- Measures one or two parameters
- Waterproof, IP67 rated
- Datalogs last 10 points with measurement time
- Rugged
- Backlit display
- Easier than ever to use

To test two or more parameters, try our DR/800 series colorimeter. See page 15.



Rugged!



Portable and convenient!



Each model comes as a test kit with required sample cells, reagents, battery, and procedure manual.



The optional soft-sided case/holster holds the Pocket Colorimeter, two vials, and more!

Specifications*

Power Supply

4 AAA batteries, approximate life of 2000 tests (use of backlight reduces this number)

Lamp

Light Emitting Diode (LED)

Detector

Silicon detector

Wavelength

Fixed wavelength ± 2 nm, varies with model

Filter Bandwidth

15 nm

Absorbance Range

0 to 2.5 Abs

Dimensions

6.1 x 15.5 x 3.5 cm
(2.45 x 6.2 x 1.4 inch)

Net Weight

0.23 kg (0.5 lbs.)

Operating Conditions

0 to 50° C; 0 to 90% relative humidity

Sample Cell Pathlength

1 cm and 22 mm

Compliance

European CE mark

Display

LCD, backlit

Warranty

2 years

Enclosure

IP67, waterproof at 1 meter for 30 minutes (excludes battery compartment)

**Subject to change without notice.*



MOST POPULAR!

Pocket Colorimeter™ II

How To Order Pocket Colorimeter™ II Standard Models

Each model comes as a test kit with required sample cells, reagents, battery, and procedure manual.

Approx. No. Description	Product Method	Range	of Tests	Number
Alachlor	Immunoassay	0.1, 0.5 ppb thresholds	18	2812900
Aluminum	Aluminon	0.02-0.80 mg/L	100	5870025
Ammonia	Salicylate	0.01-0.80 mg/L	100	5870040
Ammonia, Free Also tests for Monochloramine	Indophenol	0.02-0.50 mg/L	50	5870026
Atrazine	Immunoassay	0.1, 0.5, 3.0 ppb thresholds	18	2763500
Bromine	DPD	0.05-4.50/0.2-10 mg/L	50-100	5870001
Chloramine, Mono Also tests for Free Ammonia	Indophenol	0.04-4.50 mg/L Cl ₂	100	5870026
Chlorine, F* & T* **	DPD	0.02-2.00/0.1-8.0 mg/L	50-100	5870000
Chlorine, F & T & pH	DPD Phenol Red	0.1-10.0 mg/L Cl ₂ 6.0-8.5 pH [†]	100	5870012
Chlorine, SwifTest Dispenser				
Free Chlorine*	DPD	0.02-2.00/0.1-8.0 mg/L	125-250	5870023
Total Chlorine* **	DPD	0.02-2.00/0.1-8.0 mg/L	125-250	5870024
Chlorine Dioxide*	DPD/Glycine	0.05-5.00 mg/L	100	5870051
Chromium, Hexavalent**	1,5 Diphenylcarbohydrazide	0.01-0.70 mg/L	100	5870017
Copper**	Bicinchoninate	0.04-5.00 mg/L	100	5870019
Dissolved Oxygen	HRDO	0.2-10.0 mg/L	50	5870003
Fluoride* **	SPADNS	0.1-2.0 mg/L ^{††}	up to 50	5870005
Iron, FerroVer®*	FerroVer®	0.02-5.00 mg/L	100	5870022
Iron, TPTZ	TPTZ	0.01-1.70 mg/L	100	5870016
Lead, LeadTrak™	Fast Column Extraction	5-150 µg/L	20	5870021
Manganese, HR**	Periodate Oxidation	0.2-20.0 mg/L	100	5870015
Manganese, LR	PAN	0.01-0.70 mg/L	50	5870018
Molybdate	Ternary Complex	0.02-3.00/0.1-12.0 mg/L	100	5870010
Nickel & Cobalt	PAN	0.01-1.00 mg/L Ni 0.02-2.00 mg/L Co	100	5870020
Nitrate	Cadmium Reduction	0.4-30.0 mg/L NO ₃ -N	100	5870002
Ozone	Indigo Trisulfonate	0.01-0.25/0.01-0.75 mg/L	up to 50	5870004
PCB in Soil	Immunoassay	1, 5, 10, 50 ppm thresholds	18	2773400
Phosphate* **	PhosVer® 3	0.02-3.00 mg/L	100	5870006
Phosphonate	PhosVer® 3 w/UV Digestion	0.1-2.5/1-125 mg/L	100	5870007
Silica	Silicomolybdate	1-100 mg/L	100	5870034
Sulfate**	Turbidimetric	2-70 mg/L	100	5870029
TPH in Soil	Immunoassay	20, 50, 100, 200 ppm thresholds	18	2775000
TPH in Water	Immunoassay	2, 5, 10, 20 ppm thresholds	18	2774200
Zinc**	Zincon	0.02-3.00 mg/L	100	5870009

* Method is EPA accepted or approved for drinking water (additional sample preparation steps may be required).

** Method is EPA accepted or approved for wastewater (additional sample preparation steps may be required).

† Colorimetric pH is not approved for regulatory reporting.

†† Greater sensitivity (0.01 mg/L) is achieved by substituting bottled SPADNS reagent solution for the AccuVac® ampules provided in the kit.

Single-wavelength (generic) Pocket Colorimeter™ II instruments measure absorbance at a fixed wavelength. Create and store one or two calibrations for use in your own application.

How To Order Pocket Colorimeter™ II Generic Versions

Prod. No.	Description
5870042	Light Wavelength 420 nm
5870045	Light Wavelength 450 nm
5870047	Light Wavelength 476 nm
5870050	Light Wavelength 500 nm
5870052	Light Wavelength 528 nm
5870055	Light Wavelength 550 nm

Prod. No.	Description
5870058	Light Wavelength 580 nm
5870060	Light Wavelength 600 nm
5870065	Light Wavelength 655 nm

ACCESSORIES

5953100	Pocket Colorimeter™ II Soft-Sided Case/Holster
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NEW!



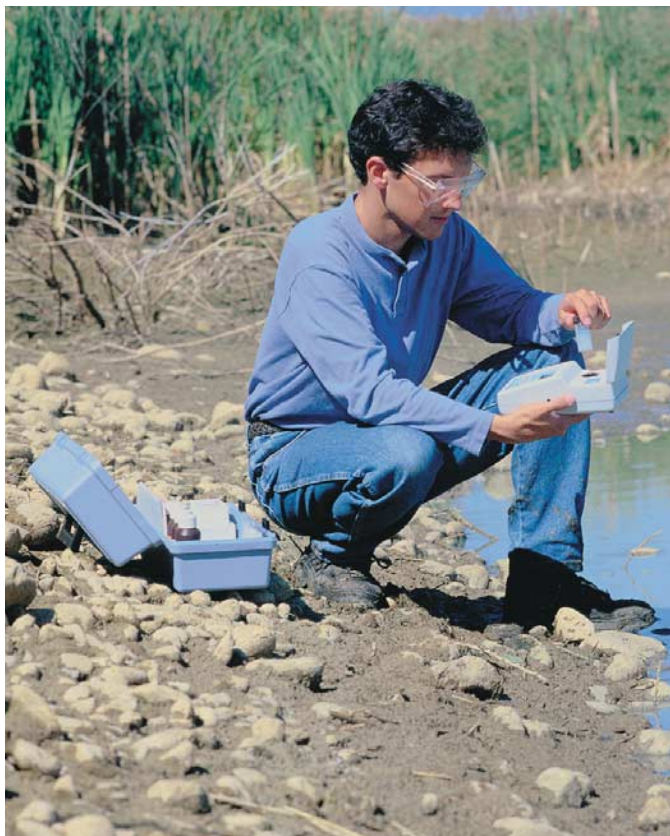
To order, contact your local distributor or call in the USA 970-669-3050



MOST POPULAR!

Turbidimeters

2100 Series Portable Turbidimeter



Bring laboratory performance on-site!

<u>Prod. No.</u>	<u>Description</u>
------------------	--------------------

USEPA-COMPLIANT

4650000	Model 2100P Portable Turbidimeter
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ISO-COMPLIANT

4474000	Model 2100P IS Portable Turbidimeter
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**EPA
APPROVED**



2100 Series Laboratory Turbidimeters

Enhanced performance for the demanding user.

<u>Prod. No.</u>	<u>Description</u>
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USEPA-COMPLIANT

4700100	2100AN Laboratory Turbidimeter
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4700000	2100N Laboratory Turbidimeter
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ISO-COMPLIANT

4790100	2100AN IS Laboratory Turbidimeter
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4790000	2100N IS Laboratory Turbidimeter
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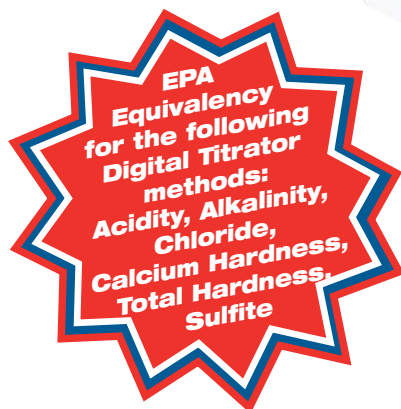
**EPA
APPROVED**



MOST POPULAR!

Hach Digital Titrator

- *Faster than a buret*
- *Rugged design*
- *18 parameters*
- *Interchangeable cartridges*



Portable Titration

Get accurate, convenient titrations without the bulk, fragility, or waste of a conventional buret.

Titration: Fast, Precise, Economical

Precise, less technique-sensitive

Digital Titrator automatically calculates precise volume of titrant dispensed. Accuracy obtained in microliters.

End-point easier to determine

The number used for calculation of sample concentration is recorded directly from the Digital Titrator's digital counter.

Saves time

Titration cartridges can be changed in seconds and eliminate glassware clean up before and after titration.

No cross contamination

Cartridges are always fresh and sealed against outside contamination.

Economical

Cartridges contain strong, concentrated reagents, so comparatively low volumes are used – waste is minimal.

Portable

With the Digital Titrator, titrations can be performed in the manufacturing plant or the field.

Problems with Buret Technique

Buret technique is dependent on operator skill.

Operator must examine level of buret to determine volume dispensed, a technique subject to visual interpretation.

Titration solutions must be prepared and measured, and all glassware must be acid-washed, rinsed with DI water, and dried.

Improper handling of reagent solutions and even slightly soiled glassware can compromise results.

Buret reagents are formulated with chemicals of low normality and subsequently require higher volumes. Ratio of standard titrant to D.T. cartridge is approximately 80:1.

Buret glassware cannot be safely transported to the plant or field.

Prod. No.	Description
1690001	Digital Titrator with plastic case, a manual, and five straight delivery tubes
1720500	Delivery tubes, straight with J-hook, 5/pk
4157800	Delivery tubes, 90° with J-hook, 5/pk
1449501	Empty titration cartridge w/blank label
KIT	
2270900	Universal Digital Titrator Kit with Digital Titrator, manual, 100-mL graduated cylinder, 125- and 250-mL Erlenmeyer flasks, demineralizer bottle, clippers, and a carrying case

Specifications*

DIGITAL TITRATOR	CARTRIDGES	TITRATOR® CONTINUOUS MIXER/STAND
Delivery 800 digits/mL or 0.00125 mL/digit	Volume 13 mL	
Accuracy ±1%. (Uncertainty of readings is 1 digit. Most samples require more than 100 digits.)	Number of Tests Most reagents are formulated to provide 100 typical titrations, but number may vary depending on sample concentration.	Dimensions 6.4 x 15.2 x 22.9 cm (2.5 x 6 x 9")
Weight 132 g (4.7 oz)	Weight (full) 56.75 g (2 oz)	Weight 2.6 kg (5.75 lb)
		Power Requirements 115 or 230 Vac, 50/60 Hz, 20 VA

*Subject to change without notice.

Continued on next page.

MOST POPULAR!

Digital Titrator Accessories

TitraStir® Continuous Mixer/Stand

The Digital Titrator can be hand-held, or you can attach it to this convenient laboratory stand. The TitraStir Titration Stand is a single-speed, magnetic stirring plate with a built-in support rod and custom holder for the Digital Titrator. Titration flasks rest on a white disc, so color changes are easy to see, and the support rod can be used to attach clamps, rings, and other hardware. Stand is supplied as a standard accessory with Hach's Amperometric Titrator.

Prod. No. Description

ACCESSORIES

- 1940000** TitraStir Stand, 115 Vac
Includes power cord, support rod and mounting hardware, holder for Digital Titrator assembly (or other apparatus), and stir bar. Digital Titrator not included.
- 1940010** TitraStir Stand, 230 Vac
Includes same as above.

REPLACEMENT PARTS FOR TitraStir STAND

- 1924700** Support Rod
- 1940100** Titrator/Electrode Holder
- 1513700** Glass Disc (white)
- 410316** Stir Bar (2" x 0.5")

1924700 Support Rod

1940100 Titrator/
Electrode Holder

1513700 Glass Disc
(white)

1940000 TitraStir Stand



More than 40
ready-to-use
titrant
solutions
are available.



EPA Equivalent Cartridges

Parameter	Method	Range	Titrant	Product No.
Acidity ¹	Methyl Orange	10-160 mg/L CaCO ₃	0.1600N NaOH	1437701
Acidity ¹	Phenolphthalein	10-160 mg/L CaCO ₃	0.1600N NaOH	1437701
Acidity ¹	Methyl Orange	100-4000 mg/L CaCO ₃	1.600N NaOH	1437901
Acidity ¹	Phenolphthalein	100-4000 mg/L CaCO ₃	1.600N NaOH	1437901
Alkalinity ²	Phenolphthalein	10-160 mg/L CaCO ₃	0.1600N H ₂ SO ₄	1438801
Alkalinity ²	Phenolphthalein	100-4000 mg/L CaCO ₃	1.600N H ₂ SO ₄	1438901
Alkalinity, Total ²	Bromcresol/Methyl Red	10-160 mg/L CaCO ₃	0.1600N H ₂ SO ₄	1438801
Alkalinity, Total ²	Bromcresol/Methyl Red	100-4000 mg/L CaCO ₃	1.600N H ₂ SO ₄	1438901
Aqua Ammonia	Colorimetric pH End Point	5-35 % as NH ₃	8.00 N Sulfuric Acid	1439101
Chloride ^{3*}	Mercuric Nitrate	10-160 mg/L Cl ⁻	0.2256N Hg(NO ₃) ₂	1439301
Chloride ^{3*}	Mercuric Nitrate	100-8000 mg/L Cl ⁻	2.256N Hg(NO ₃) ₂	92101
Hardness, Calcium ⁴	EDTA (CalVer® 2)	10-160 mg/L CaCO ₃	0.0800M EDTA	1436401
Hardness, Calcium ⁴	EDTA (CalVer® 2)	100-4000 mg/L CaCO ₃	0.800M EDTA	1439901
Hardness, Total ⁵	EDTA (ManVer® 2)	10-160 mg/L CaCO ₃	0.0800M EDTA	1436401
Hardness, Total ⁵	EDTA (ManVer® 2)	100-4000 mg/L CaCO ₃	0.800M EDTA	1439901
Sulfite ⁶	Iodate-Iodide	0-800 mg/L SO ₃ ²⁻	0.3998N KIO ₃ -KI	1496101

¹ Equivalent to EPA Reference Method 305.1 when used with a pH meter as per the Guide to Method Flexibility and Approval of EPA Water Methods, US Environmental Protection Agency, Engineering and Analysis Division, Office of Science and Technology, Office of Water, Washington, DC., Draft, December 1996

² Equivalent to EPA Reference Method 310.1 when used with a pH meter as per the Guide to Method Flexibility and Approval of EPA Water Methods, US Environmental Protection Agency, Engineering and Analysis Division, Office of Science and Technology, Office of Water, Washington, DC., Draft, December 1996

³ Equivalent to EPA Reference Method 325.3 as per the Guide to Method Flexibility and Approval of EPA Water Methods, US Environmental Protection Agency, Engineering and Analysis Division, Office of Science and Technology, Office of Water, Washington, DC., Draft, December 1996.

⁴ Equivalent to EPA Reference Method 215.2 as per the Guide to Method Flexibility and Approval of EPA Water Methods, US Environmental Protection Agency, Engineering and Analysis Division, Office of Science and Technology, Office of Water, Washington, DC., Draft, December 1996.

⁵ Equivalent to EPA Reference Method 130.2 as per the Guide to Method Flexibility and Approval of EPA Water Methods, US Environmental Protection Agency, Engineering and Analysis Division, Office of Science and Technology, Office of Water, Washington, DC., Draft, December 1996.

⁶ Equivalent to EPA Reference Method 377.1 as per the Guide to Method Flexibility and Approval of EPA Water Methods, US Environmental Protection Agency, Engineering and Analysis Division, Office of Science and Technology, Office of Water, Washington, DC., Draft, December 1996.

* Not for delivery to Connecticut.

MOST POPULAR!

Digital Titrator Cartridges and Reagent Sets

Parameter	Method	Range	Titrant	DT Cartridge Prod. No.	Reagent Set Prod. No.
Acid-Base	Phenolphthalein End Point	1-10 meq/L Acid	1.6N NaOH	1437901	
Acid-Base	Phenolphthalein End Point	10-4000 meq/L Acid	8N NaOH	1438101	
Acid-Base	Phenolphthalein End Point	1-10 meq/L Base	1.6N H ₂ SO ₄	1438901	
Acid-Base	Phenolphthalein End Point	10-4000 meq/L Base	8N H ₂ SO ₄	1439101	
Acid-Base	Phenolphthalein End Point	10-4000 meq/L Base	8N HCl	1439001	
Acidity	Methyl Orange	10-160 mg/L CaCO ₃	0.1600N NaOH	1437701	2272800
Acidity	Phenolphthalein	10-160 mg/L CaCO ₃	0.1600N NaOH	1437701	2272800
Acidity	Methyl Orange	100-4000 mg/L CaCO ₃	1.600N NaOH	1437901	2272800
Acidity	Phenolphthalein	100-4000 mg/L CaCO ₃	1.600N NaOH	1437901	2272800
Alkalinity	Phenolphthalein	10-160 mg/L CaCO ₃	0.1600N H ₂ SO ₄	1438801	2271900
Alkalinity	Phenolphthalein	100-4000 mg/L CaCO ₃	1.600N H ₂ SO ₄	1438901	2271900
Alkalinity, Total	Bromcresol/Methyl Red	10-160 mg/L CaCO ₃	0.1600N H ₂ SO ₄	1438801	2271900
Alkalinity, Total	Bromcresol/Methyl Red	100-4000 mg/L CaCO ₃	1.600N H ₂ SO ₄	1438901	2271900
Aqua Ammonia	Colorimetric pH Endpoint	5-35% NH ₃	8.0N H ₂ SO ₄	1439101	2930500
Carbon Dioxide	Phenolphthalein	10-100 mg/L CO ₂	0.3636N NaOH	1437801	2272700
Carbon Dioxide	Phenolphthalein	100-1000 mg/L CO ₂	3.636N NaOH	1438001	2272700
Chelant, Free	Magnesium Chloride	0-20 mg/L CaCO ₃	0.0800M MgCl ₂	2062501	
Chelant, Total	Bismuth Nitrate	0-40 mg/L as Na ₄ EDTA	0.0200M Bi(NO ₃) ₃	2434501	
Chelant, Total	Methylthymol Blue	1-1000 mg/L EDTA	0.0200M Bi(NO ₃) ₃	2434501	
Chloride	Silver Nitrate	2.5-150 g/L Cl ⁻	1.128N AgNO ₃	1439701	2288000
Chloride	Mercuric Nitrate	10-160 mg/L Cl ⁻	0.2256N Hg(NO ₃) ₂	1439301*	2272600
Chloride	Silver Nitrate	10-100 mg/L Cl ⁻	0.2256N AgNO ₃	1439601	2288000
Chloride	Silver Nitrate	100-10000 mg/L Cl ⁻	1.128N AgNO ₃	1439701	2288000
Chloride	Mercuric Nitrate	100-8000 mg/L Cl ⁻	2.256N Hg(NO ₃) ₂	92101*	2272600
Chlorine, Free	Amperometric, Forward	0-1000 µg/L Cl ₂	0.00564N PAO	199901	
Chlorine, Free	DPD-FEAS	0-3.00 mg/L Cl ₂	0.00564N FEAS	2292301	2445300
Chlorine, Total	Amperometric, Back	6-1000 µg/L Cl ₂	0.028N Iodine	2333301	
Chlorine, Total	Amperometric, Forward	0-1000 µg/L Cl ₂	0.00564N PAO	199901	
Chlorine, Total	DPD-FEAS	0-3.00 mg/L Cl ₂	0.00564N FEAS	2292301	2445300
Chlorine, Total	Iodometric	1-400 mg/L Cl ₂	0.02256N Na ₂ S ₂ O ₃	2409101	
Chlorine, Total	Iodometric	20-2000 mg/L Cl ₂	0.113N Na ₂ S ₂ O ₃	2267301	2272500
Chlorine, Total	Iodometric	2000-70000 mg/L Cl ₂	2.00N Na ₂ S ₂ O ₃	1440101	2444800
Chromate	Iodometric	20-400 mg/L CrO ₄ ²⁻	0.2068N Na ₂ S ₂ O ₃	2267601	2272400
Hardness, Calcium	EDTA (CalVer® 2)	1-16 G.d.h.	0.1428M EDTA	1496001	2447300
Hardness, Calcium	EDTA (CalVer® 2)	10-200 G.d.h.	0.714M EDTA	1495901	2447400
Hardness, Calcium	EDTA (CalVer® 2)	10-160 mg/L CaCO ₃	0.0800M EDTA	1436401	2447200
Hardness, Calcium	EDTA (CalVer® 2)	100-4000 mg/L CaCO ₃	0.800M EDTA	1439901	2447500
Hardness, Total	EDTA (ManVer® 2)	1-16 G.d.h.	0.1428M EDTA	1496001	2447800
Hardness, Total	EDTA (ManVer® 2)	10-200 G.d.h.	0.714M EDTA	1495901	2447900
Hardness, Total	EDTA (ManVer® 2)	10-160 mg/L CaCO ₃	0.0800M EDTA	1436401	2448000
Hardness, Total	EDTA (ManVer® 2)	100-4000 mg/L CaCO ₃	0.800M EDTA	1439901	2448100
Hardness, Total, Sequential	EDTA (CalVer® 2 & ManVer® 2)	1-16 G.d.h.	0.1428M EDTA	1496001	
Hardness, Total, Sequential	EDTA (CalVer® 2 & ManVer® 2)	10-200 G.d.h.	0.714M EDTA	1495901	2448500
Hardness, Total, Sequential	EDTA (CalVer® 2 & ManVer® 2)	10-160 mg/L CaCO ₃	0.0800M EDTA	1436401	2448600
Hardness, Total, Sequential	EDTA (CalVer® 2 & ManVer® 2)	100-4000 mg/L CaCO ₃	0.800M EDTA	1439901	2448700
Hypochlorite	Iodometric Method	50-150 g/L Cl ₂	2.26N Na ₂ S ₂ O ₃	2686901	2687000
Iron	EDTA	10-100 mg/L Fe	0.0716M EDTA	2081701	2449200
Iron	EDTA	100-1000 mg/L Fe	0.716M EDTA	2081801	2449300
Nitrite	Ceric Ion Titration	100-2500 mg/L NaNO ₂	0.5 N Ceric Ion	2270701	
Oxygen, Dissolved	Azide mod. of Winkler Method	1-10 mg/L DO	0.200N Na ₂ S ₂ O ₃	2267501	2272200
Oxygen, Dissolved	Azide mod. of Winkler Method	10-100 mg/L DO	2.00N Na ₂ S ₂ O ₃	1440101	
Salinity	Mercuric Nitrate	0-100 ppt Salinity	2.570N HgNO ₃	2393701*	
Sulfite	Iodate-Iodide	0-800 mg/L SO ₃ ²⁻	0.3998N KIO ₃ ·KI	1496101	2272300
Volatile Acids	Phenolphthalein End Point	100-2400 mg/L CH ₃ COOH	0.9274N NaOH	1484201	2460200

*Not for delivery to Connecticut.

Portable Titration



Spec[✓]™ Standards

Chlorine

Description	Prod. No.
Free Chlorine, 10-mL Powder Pillows, Pk/100	2105569
Total Chlorine, 10-mL Powder Pillows, Pk/100	2105669
Free Chlorine, SwifTest Dispenser + Reagent (250 tests)	2802300
Free Chlorine, SwifTest Dispenser Reagent (refill)	2105560
Total Chlorine, SwifTest Dispenser+ Reagent (250 tests)	2802400
Total Chlorine, SwifTest Dispenser Reagent (refill)	2105660
Spec [✓] Gel Secondary Standard Kit-Chlorine, DPD	2635300
Spec [✓] Gel Secondary Standard Kit-Chlorine, DPD	2893300

COD (Chemical Oxygen Demand)

Description	Prod. No.
COD Digestion Vials—16 mm, LR, Pk/25	2125825
COD Digestion Vials—16 mm, LR, Pk/150	2125815
COD TNTplus—13 mm, LR, Pk/25	TNT821
COD TNTplus—13 mm, LR, Pk/150	TNT82106



COD TNTplus™

Fluoride

Description	Prod. No.
SPADNS Fluoride AccuVac, Pk/25	2506025
SPADNS Reagent Solution, 500mL	44449
Spec [✓] Gel Secondary Standard Kit - Fluoride	2712500



Nitrate TNTplus™

Iron

Description	Prod. No.
FerroVer Iron Reagent Powder Pillows, 10mL, Pk/100	2105769

Nitrate

Description	Prod. No.
Nitrate Reagent Set, 10 mL, LR, Pk/100	2429800
Nitrate, Nitrogen TNTplus, LR, Pk/25	TNT835
Nitrate, Nitrogen TNTplus, HR, Pk/25	TNT836



Ammonia TNTplus™

Ammonia

Description	Prod. No.
Ammonia Reagent Set, Salicylate, 10 mL, Pk/100	2668000
Ammonia Reagent Set, Nessler's, Pk/250	2458200
Ammonia TNTplus, ULR, Pk/25	TNT830
Ammonia TNTplus, LR, Pk/25	TNT831
Ammonia TNTplus, HR, Pk/25	TNT832

Phosphorus

Description	Prod. No.
PhosVer 3 Powder Pillows, 10mL, Pk/100	2106069
Phosphorus TNTplus, Reactive, Pk/25	TNT846
Phosphorus TNTplus, Reactive and Total, LR, Pk/25	TNT843
Phosphorus TNTplus, Reactive and Total, HR, Pk/25	TNT844
Phosphorus TNTplus, Reactive and Total, UHR, Pk/25	TNT845

Ozone

Description	Prod. No.
Ozone AccuVac, Pk/25	2516025
Ozone AccuVac, Pk/25	2517025
Ozone AccuVac, Pk/25	2518025
Spec [✓] Gel Secondary Standard Kit - Ozone MR	2708000



Ozone and Fluoride AccuVac® Ampules

MOST POPULAR!

Aqua Ammonia Test Kit Model NI-HRDT

- Quickly determine aqua ammonia (ammonium hydroxide) solution concentrations
- Ideal for on-site analysis of bulk aqua ammonia deliveries at drinking water or chloramination facilities
- Accurate titration method using the Hach Digital Titrator

Prod. No.	Range	No. of Tests
2930400	5-35% (50-350 g/L) as NH_3	100
Also available:		
2930500	Reagent Set for HR Aqua Ammonia Kit Includes: 8.0 N Sulfuric Acid Titration Cartridge and Wide Range pH Indicator Solution	

NEW!



Free and Total Chlorine Test Strips

- Accurate and easy to use—just dip and read!
- Great for quick, on-site evaluations of chlorine levels

Prod. No.	Range	Steps	No. of Tests
2745050	0-10 mg/L	0, 0.5, 1.0, 2.0, 4.0, 10.0 mg/L	Bottle of 50
2793944	Also available individually wrapped, box of 250.		

Arsenic Test Kit

- No lab analysis needed—detect arsenic levels in the field to assess compliance with the new EPA Arsenic Rule
- Reliable test strip method recovers 100% of inorganic arsenic in samples

Prod. No.	Range	Steps	No. of Tests
2800000	0-500 $\mu\text{g/L}$ (ppb)	0, 10, 30, 50, 70, 300, 500 $\mu\text{g/L}$ (ppb)	100

Free and Total Chlorine Test Kit Model CN-66

- Our most popular test kit!
- Quickly and accurately measure chlorine levels in the field or lab

Prod. No.	Range	No. of Tests
223101	0.1 – 3.5 mg/L	50 Free Cl_2 50 Total Cl_2
Other kits also available:		
223102	Model CN-66F Free Chlorine	100
223103	Model CN-66T Total Chlorine	100



Nitrate and Nitrite Test Strips

- Accurate and easy to use – just dip and read!
- Get results in less than 1 minute, in the field or in the lab

Prod. No.	Range	Steps	No. of Tests
2745425	Nitrate: 0-50 mg/L Nitrite: 0-3 mg/L	0, 1, 2, 5, 10, 20, 50 mg/L 0, 0.15, 0.3, 1, 1.5, 3.0 mg/L	Bottle of 25

5-in-1 Water Quality Test Strips

- Great for quick, on-site evaluations of water quality
- Five water quality measurements on 1 strip!

Prod. No.	Parameter	Range	Steps	No. of Tests
2755250	Free Chlorine	0-10 mg/L	0, 0.5, 1.0, 2.0, 4.0, 10.0	Bottle of 50
	Total Chlorine	0-10 mg/L	0, 0.5, 1.0, 2.0, 4.0, 10.0	
	Total Hardness (as CaCO_3)	0-25 gpg 0-425 mg/L	0, 1.5, 3, 7, 15, 25 0, 25, 50, 120, 250, 425	
	Total Alkalinity (as CaCO_3)	0-240 mg/L	0, 40, 80, 120, 180, 240	
	pH	6.2-8.4	6.2, 6.8, 7.2, 7.8, 8.4 pH units	



Some products contain mercury. Dispose mercury-containing items according to local, state, and federal regulations.

Test Kits and Test Strips

To order, contact your local distributor or call in the USA 970-669-3050



AMMONIA

Hach's complete line of Ammonia methods (Nessler and Salicylate) provides the right choice for your application.

- Multiple methods and reagent platforms available
- Nessler method is EPA approved
- TNTplus ammonia tests are mercury-free

- All new TNTplus methods are barcoded for automatic method detection

**EPA
APPROVED**
WHERE INDICATED

Reagents

Description	Platform	Range	Instrument*	EPA Compliant	# Tests	Product Number
Ammonia Reagent Set , Salicylate, 10 mL	PP	0.01-0.50 mg/L NH ₃ -N	All except DR/820		100	2668000
Set includes:						
Ammonia Salicylate Powder Pillows	PP				50	2653299
Ammonia Cyanurate Powder Pillows	PP				50	2653199
Ammonia Reagent Set , Salicylate, 25 mL	PP	0.01-0.50 mg/L NH ₃ -N	For older instruments		100	2243700
Set includes:						
Ammonia Salicylate Powder Pillows	PP				25	2395366
Ammonia Cyanurate Powder Pillows	PP				25	2395566
Ammonia Reagent Set , Nessler	S	0.02-2.50 mg/L NH ₃ -N	DR 5000, DR 2800	Yes	250	2458200
Set includes:						
Nessler Reagent, 500 mL	S				250	2119449
Mineral Stabilizer, 50 mL	S				250	2376626
Polyvinyl Alcohol Dispersing Agent, 50 mL	S				250	2376526
Ammonia Reagent Set , AmVer (Salicylate), LR	TNT	0.02-2.50 mg/L NH ₃ -N	DR 5000, DR 2800 DR/890, DR/850		25-50 [†]	2604545
Ammonia Reagent Set , AmVer (Salicylate), HR	TNT	0.4-50.0 mg/L NH ₃ -N	DR 5000, DR2800 DR/890, DR/850		25-50 [†]	2606945
Ammonia TNTplus™, ULR	TNT+	0.015-2.00 mg/L NH ₃ -N	DR 5000, DR 2800		25	TNT830
Ammonia TNTplus™, LR	TNT+	1-12 mg/L NH ₃ -N	DR 5000, DR 2800		25	TNT831
Ammonia TNTplus™, HR	TNT+	2-47 mg/L NH ₃ -N	DR 5000, DR 2800		25	TNT832
Mineral Stabilizer Solution (for Nessler and TKN)	S	50 mL SCDB				2376626
Polyvinyl Alcohol Dispersing Agent (for Nessler)	S	50 mL SCDB				2376526

LACHAT INSTRUMENT REAGENTS

Ammonia Reagent Set		Please contact Technical Support for determination of method and range.	Lachat QuikChem® 8500 System	500	52904
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*Generally, the DR 5000 runs the same methods as the DR/4000. The DR 2800 runs the same methods as the DR/2500 and DR/2400. Some exceptions do exist.

[†]Dependent on the number of performed reagent blanks.

Test Strips

Description	Platform	Range	# Tests	Product Number
Ammonia Test Strip	TS	0-6 mg/L NH ₃ -N (0, 0.25, 0.5, 1, 3, 6 steps)	25	2755325

Test Kits

Description	Platform	Range		# Tests	Product Number
Pocket Colorimeter™ II - Ammonia	PCII, PP	0.01-0.80 mg/L NH ₃ -N	Kit includes PC II	100	5870040
Nitrogen Ammonia Test Kit (Model NI-SA)	CD	0-2.5 mg/L NH ₃ -N		100	2428700
Nitrogen Ammonia Test Kit, For Freshwater (Model NI-8)	CD	0-3.0 mg/L NH ₃ -N		100	224100
Ammonia Low Range Test Kit for Freshwater	CC	0-0.8 mg/L NH ₃ -N		25	2266900
Ammonia Mid Range Test Kit for Freshwater	CC	0.5-2.5 mg/L NH ₃ -N		25	1252400

PLATFORM KEY: AV=AccuVac®; CC=Color Cube; CD=Color Disc; DCT=Drop Count Titration; DT=Digital Titrator; EX=Extraction; IA=Immunoassay; PCII=Pocket Colorimeter™ II; PP=Powder Pillows; RL=Rapid Liquid; S=Solution; SP=Solution Pillow; SW=SwiftTest™; TNT=Test 'N Tube™; TNT+=TNTplus™; TRB=Turbidity; TS=Test Strip



AMMONIA

Standards

Description	Volume	Concentration	Product Number
Ammonia Standard Solution as NH ₃ -N (NIST)	500 mL	1 mg/L NH ₃ -N	189149
Ammonia Nitrogen Standard Solution	500 mL	10 mg/L NH ₃ -N	15349
Ammonia Standard Solution as NH ₃ -N (NIST)	10 mL/16 Voluette Ampoules	50 mg/L NH ₃ -N	1479110
Ammonia Standard Solution	2 mL/20 Voluette Ampoules	50 mg/L NH ₃ -N	1479120
Ammonia Standard Solution as NH ₃ -N	500 mL	100 mg/L NH ₃ -N	2406549
Ammonia Standard Solution as NH ₃ -N (NIST)	10 mL/16 Voluette Ampoules	150 mg/L NH ₃ -N	2128410
Ammonia Standard Solution	2 mL/20 Voluette Ampoules	150 mg/L NH ₃ -N	2128420
Ammonia Standard Solution	10 mL/16 Voluette Ampoules	160 mg/L NH ₃ -N	2109110
Ammonia Standard Solution	1 L	1,000 mg/L NH ₃ -N	2354153
Wastewater Influent Inorganics, Mixed Parameter QC Standard; (Ammonia, Nitrate, Phosphate, COD, Sulfate, TOC)	500 mL	Ammonia-15 mg/L NH ₃ -N; Nitrate-10 mg/L NO ₃ -N; Phosphate-10 mg/L PO ₄ ³⁻ ; COD-500 mg/L COD; Sulfate-400 mg/L SO ₄ ²⁻ ; TOC-161 mg/L TOC	2833149
Wastewater Effluent Inorganics, Mixed Parameter QC Standard; (Ammonia, Nitrate, Phosphate, COD, Sulfate, TOC)	500 mL	Ammonia- 2 mg/L NH ₃ -N; Nitrate- 4 mg/L NO ₃ -N; Phosphate- 2 mg/L PO ₄ ³⁻ ; COD- 25 mg/L COD; Sulfate- 50 mg/L SO ₄ ²⁻ ; TOC- 8 mg/L TOC	2833249

FREE AMMONIA

- Fast method
- Extended range
- Available on Hach Spectrophotometers and Colorimeters for versatile use in field and lab environments
- Increased accuracy
- Ideal for helping to identify nitrification excursions

Reagents

Description	Platform	Range	Instrument*	# Tests	Product Number
Free Ammonia Reagent Set Set includes: Free Ammonia Reagent Solution Monochlor F Powder Pillows	PP, S S PP	0.02-0.50 mg/L NH ₃ -N	All except DR/820	50 50 50	2879700 2877336 2802299
Free Ammonia Reagent Set Set includes: same as above	PP, S	0.02-0.50 mg/L NH ₃ -N	All except DR/820	250	2879701
Free Ammonia Reagent Set Starter Kit Includes reagents, sample cells, and instructions.	PP, S	0.02 to 0.50 mg/L NH ₃ -N	DR 5000, DR/4000, DR/2010 DR/890, DR/850, DR/820, PC II		2879704
Free Ammonia Reagent Set Starter Kit Includes reagents, sample cells, and instructions.	PP, S	0.02 to 0.50 mg/L NH ₃ -N	DR/2500, DR/2400		2879705

*Generally, the DR 5000 runs the same methods as the DR/4000. The DR 2800 runs the same methods as the DR/2500 and DR/2400. Some exceptions do exist.

Tests Kits

Description	Platform	Range	# Tests	Product Number
Pocket Colorimeter™ II Test Kit – Free Ammonia & Monochloramine	PP, S	0.02-0.50 mg/L NH ₃ -N 0.04-4.50 mg/L Cl ₂	Kit includes PC II 50 Free Ammonia or 100 Monochloramine	5870026
Nitrification Control Kit Contains tests for: Free Ammonia Monochloramine Nitrite Total Chlorine, LR Total Chlorine, HR	PP, S	0.02-0.50 mg/L NH ₃ -N 0.0-4.50 mg/L Cl ₂ 0-0.350 mg/L NO ₂ ⁻ -N 0-2.00 mg/L Cl ₂ 0.1-10.0 mg/L Cl ₂	Kit includes DR/890 50 100 100 100 100	2882200

CHLORINE

- Multiple reagent platforms available
- Hach's DPD formulation allows for high levels of sample hardness with no interference and unparalleled reagent stability
- EPA accepted DPD method
- Multiple ranges available—from ultra low range to high range



Reagents

Description	Platform	Range	Instrument*	EPA Compliant	# Tests	Product Number
ULTRA LOW RANGE						
Total Chlorine Reagent Set		2-500 µg/L Cl ₂	DR 5000, DR 2800	Yes	20	2563000
Set Includes:						
ULR Chlorine Buffer Solution, 1.5 mL Ampules	S				20	2493120
DPD Indicator Solution for ULR Chlorine, 1.5 mL Ampules	S				20	2493220
Blanking Reagent for ULR Chlorine, 29 mL	S				20	2493023
LOW RANGE						
Free Chlorine Reagent Set, Rapid Liquid		0.02-2.00 mg/L Cl ₂	DR 5000, DR 2800		450	2556900
Set Includes:						
DPD Indicator Powder, 24 g	Jar				450	2297255
Free Chlorine Indicator Solution, 473 mL	S				450	2314011
Free Chlorine Buffer Solution, 473 mL	S				450	2314111
Total Chlorine Reagent Set, Rapid Liquid		0.02-2.00 mg/L Cl ₂	DR 5000, DR 2800		450	2557000
Set Includes:						
DPD Indicator Powder, 24 g	Jar				450	2297255
Total Chlorine Indicator Solution, 473 mL	S				450	2263411
Total Chlorine Buffer Solution, 473 mL	S				450	2263511
Free Chlorine, 5-mL Powder Pillows	PP	0.1 - 3.5 mg/L Cl ₂	Test Kits	Yes	100	1407799
Free Chlorine, 5-mL Powder Pillows	PP	0.1 - 3.5 mg/L Cl ₂	Test Kits	Yes	1,000	1407728
Free Chlorine, 10-mL Powder Pillows	PP	0.02-2.00 mg/L Cl ₂	All	Yes	100	2105569
Free Chlorine, 10-mL Powder Pillows	PP	0.02-2.00 mg/L Cl ₂	All	Yes	1,000	2105528
Free Chlorine, 25-mL Powder Pillows	PP	0.02-2.00 mg/L Cl ₂	For older instruments	Yes	100	1407099
Free Chlorine, AccuVac Reagent	AV	0.02-2.00 mg/L Cl ₂	All	Yes	25	2502025
Free Chlorine, SwifTest Dispenser	SW	0.02-2.00 mg/L Cl ₂	All	Yes	250	2802300
Free Chlorine, SwifTest Dispenser Reagent (refill)	SW	0.02-2.00 mg/L Cl ₂	All	Yes	250	2105560
Free Chlorine, RL, Pour Thru Cell Reagent Set	RL	0.02-2.00 mg/L Cl ₂	DR 5000, DR 2800			2556900
Total Chlorine, 5-mL Powder Pillows	PP	0.1 - 3.5 mg/L Cl ₂	Test Kits	Yes	100	1407699
Total Chlorine, 5-mL Powder Pillows	PP	0.1 - 3.5 mg/L Cl ₂	Test Kits	Yes	1,000	1407628
Total Chlorine, 10-mL Powder Pillows	PP	0.02-2.00 mg/L Cl ₂	All	Yes	100	2105669
Total Chlorine, 10-mL Powder Pillows	PP	0.02-2.00 mg/L Cl ₂	All	Yes	1,000	2105628
Total Chlorine, 25-mL Powder Pillows	PP	0.02-2.00 mg/L Cl ₂	For older instruments	Yes	100	1406499
Total Chlorine, AccuVac Reagent	AV	0.02-2.00 mg/L Cl ₂	All	Yes	25	2503025
Total Chlorine, SwifTest Dispenser	SW	0.02-2.00; 0.02-4.50 mg/L Cl ₂	All	Yes	250	2802400
Total Chlorine, SwifTest Dispenser Reagent (refill)	SW	0.02-2.00; 0.02-4.50 mg/L Cl ₂	All	Yes	250	2105660
Total Chlorine, RL, Pour Thru Cell Reagent Set	RL	0.02-2.00 mg/L	DR 5000, DR 2800			2557000
HIGH RANGE						
Free Chlorine, 25-mL Powder Pillows†	PP	0.1-10.0 mg/L Cl ₂	All	Yes	100	1407099
Free Chlorine, 25-mL Powder Pillows†	PP	0.1-10.0 mg/L Cl ₂	All	Yes	1,000	1407028
Free Chlorine, Test 'N Tube	TNT	0.09-5.00 mg/L Cl ₂	All except PC II		25-50††	2105545
Total Chlorine, 25-mL Powder Pillows†	PP	0.1-10.0 mg/L Cl ₂	All	Yes	100	1406499
Total Chlorine, 25-mL Powder Pillows†	PP	0.1-10.0 mg/L Cl ₂	All	Yes	1,000	1406428
Total Chlorine, Test 'N Tube	TNT	0.09-5.00 mg/L Cl ₂	All except PC II		25-50††	2105645

*Generally, the DR 5000 runs the same methods as the DR/4000. The DR 2800 runs the same methods as the DR/2500 and DR/2400. Some exceptions do exist.

†Also used in Test Kit Model CN-80 and older instruments. ††Dependent on the number of performed reagent blanks.

Continued on next page.

Our SwifTest™ Reagent Dispenser Makes High-Volume Testing Easy!

- Easily dispense your Chlorine reagent for high-volume testing
- Reagent cost is only \$39.00 for a 250-test cartridge
- Available for Free Chlorine (Order Product No. 2802300)
- Available for Total Chlorine (Order Product No. 2802400)



PLATFORM KEY: AV=AccuVac®; CC=Color Cube; CD=Color Disc; DCT=Drop Count Titration; DT=Digital Titrator; EX=Extraction; IA=Immunoassay; PCII=Pocket Colorimeter™ II; PP=Powder Pillows; RL=Rapid Liquid; S=Solution; SP=Solution Pillow; SW=SwifTest™; TNT=Test 'N Tube™; TNT+=TNTplus™; TRB=Turbidity; TS=Test Strip

CHLORINE

Reagents (Continued)

Description	Platform	Range	Instrument	EPA Compliant	# Tests	Product Number
AMPEROMETRIC TITRATOR TITRATION (Buret Titration for Free Chlorine)						
Phenylarsine Oxide Solution, 0.00564 N, 1 L	S	0.5 mg/L and above Cl_2	AutoCAT™ 9000	Yes		199953
Phosphate Buffer Solution, pH 7.0, 100 mL	S	0.5 mg/L and above Cl_2	AutoCAT™ 9000	Yes	100	2155332
AMPEROMETRIC DIGITAL TITRATOR TITRATION (Forward Titration for Free Chlorine)						
Phenylarsine Oxide Solution, 0.00564 N CRTG	DT	0 - 1,000 $\mu\text{g/L Cl}_2$		Yes		199901
Phosphate Buffer Solution, pH 7.0, 100 mL	S	0 - 1,000 $\mu\text{g/L Cl}_2$		Yes	100	2155332
AMPEROMETRIC TITRATOR TITRATION (Back Titration for Total Chlorine)						
Acetate Buffer Solution, pH 4.0, w/ dropper, 100 mL	S	0.0051-5.000 mg/L Cl_2	AutoCAT™ 9000	Yes	100	1490932
Iodine Standard Solution, 0.0282N	S	0.0051-5.000 mg/L Cl_2	AutoCAT™ 9000	Yes	100	2333353
Phenylarsine Oxide (PAO) Titrant, 0.00564 N, 1 L	S	0.0051-5.000 mg/L Cl_2	AutoCAT™ 9000	Yes		199953
Phosphate Buffer Solution, pH 7.0, w/ dropper, 100 mL	S	0.0051-5.000 mg/L Cl_2	AutoCAT™ 9000	Yes	100	2155332
Potassium Iodide, SwiftTest Refill		0.0051-5.000 mg/L Cl_2	AutoCAT™ 9000	Yes		107760
AMPEROMETRIC TITRATOR TITRATION (Forward Titration for Total Chlorine)						
Acetate Buffer Solution, pH 4.0, w/ dropper, 100 mL	S	0.0012-5.000 mg/L Cl_2	AutoCAT™ 9000	Yes	100	1490932
Phenylarsine Oxide (PAO) Titrant, 0.00564 N, 1 L	S	0.0012-5.000 mg/L Cl_2	AutoCAT™ 9000	Yes		199953
Potassium Iodide, SwiftTest Refill		0.0012-5.000 mg/L Cl_2	AutoCAT™ 9000	Yes		107760
AMPEROMETRIC DIGITAL TITRATOR TITRATION (Back Titration for Total Chlorine)						
Acetate Buffer Solution, pH 4.0, 100 mL	S	6 -1,000 $\mu\text{g/L Cl}_2$		Yes	100	1490932
Potassium Iodide Powder Pillows	PP	6 -1,000 $\mu\text{g/L Cl}_2$			100	107799
Standard Iodine Titrant Solution Cartridge, 0.028 N	DT	6 -1,000 $\mu\text{g/L Cl}_2$		Yes		2333301
Sodium Thiosulfate Standard Solution, 0.00564 N, 100 mL	S	6 -1,000 $\mu\text{g/L Cl}_2$		Yes	100	2408842
AMPEROMETRIC DIGITAL TITRATOR TITRATION (Forward Titration for Total Chlorine)						
Phenylarsine Oxide Solution, 0.00564 N CRTG	DT	15-1,000 $\mu\text{g/L Cl}_2$		Yes		199901
Acetate Buffer Solution, pH 4.0, 100 mL	S	15-1,000 $\mu\text{g/L Cl}_2$		Yes	100	1490932
Potassium Iodide Powder Pillows	PP	15-1,000 $\mu\text{g/L Cl}_2$		Yes	100	107799
IODOMETRIC METHOD (Using Sodium Thiosulfate)						
Buret Titration						
Dissolved Oxygen 3 Powder Pillows	PP	0-40,000 mg/L			100	98799
Potassium Iodide Powder Pillows	PP	0-40,000 mg/L			100	107799
Sodium Thiosulfate Standard Solution, 0.075 N, 1 L	S	0-400 mg/L			40-100	35253
Starch Indicator Solution, 100 mL	S				40-100	34932
DPD-FEAS						
DPD Free Chlorine Powder Pillow	PP	0-3.00 mg/L Cl_2			100	1407099
DPD Total Chlorine Powder Pillow	PP	0-3.00 mg/L Cl_2			100	1406499
Ferrous Ethylenediammonium Sulfate (FEAS) Titration Cartridge		0-3.00 mg/L Cl_2				2292301
Potassium Iodide solution, 30 g/L, 100 mL	S					34332
DIGITAL TITRATOR TITRATION						
Total Chlorine Reagents, Digital Titrator, Low Range						
Dissolved Oxygen 3 Powder Pillows	DT	1-400 mg/L Cl_2			100	98799
Potassium Iodide Powder Pillows	PP				100	107799
Sodium Thiosulfate Titration Cartridge, 0.02256 N	DT				40-100	2409101
Starch Indicator Solution, 100 mL	S				40-100	34932
Total Chlorine Reagent Set, Digital Titrator, Mid Range						
Set Includes:	DT	20-2,000 mg/L Cl_2			100	2272500
Dissolved Oxygen 3 Powder Pillows	PP				100	98799
Potassium Iodide Powder Pillows	PP				100	107799
Sodium Thiosulfate Titration Cartridge, 0.113 N	DT				40-100	2267301
Starch Indicator Solution, 100 mL	S				40-100	34932
Total Chlorine Reagent Set, Digital Titrator, High Range						
Set Includes:	DT	2,000-70,000 mg/L Cl_2			100	2444800
Dissolved Oxygen 3 Powder Pillows	PP				100	98799
Potassium Iodide Powder Pillows	PP				50	2059996
Sodium Thiosulfate Titration Cartridge, 2.00 N	DT				40-100	1440101
Starch Indicator Solution, 100 mL	S				40-100	34932

PLATFORM KEY: AV=AccuVac®; CC=Color Cube; CD=Color Disc; DCT=Drop Count Titration; DT=Digital Titrator; EX=Extraction; IA=Immunoassay; PCIL=Pocket Colorimeter™ II; PP=Powder Pillows; RL=Rapid Liquid; S=Solution; SP=Solution Pillow; SW=SwiftTest™; TNT=Test 'N Tube™; TNT+=TNTplus™; TRB=Turbidity; TS=Test Strip

CHLORINE



MOST POPULAR!

Test Strips

Description	Platform	Range	# Tests	Product Number
LOW RANGE				
Free & Total Chlorine Test Strips, Low Range	TS	0-10 mg/L Cl ₂ (0, 0.5, 1, 2, 4, 10 steps)	50	2745050
Free & Total Chlorine Test Strips, Low Range	TS	0-10 mg/L Cl ₂ (0, 0.5, 1, 2, 4, 10 steps)	250 (individually wrapped)	2793944
HIGH RANGE				
Free Chlorine Test Strips, High Range	TS	0 to 600 mg/L Cl ₂ (0, 25, 50, 100, 200, 400, 600 steps)	100	2890200

About Cl₂, I₂ and Br₂ testing...

All of our total chlorine test kits can be used to measure iodine or bromine in the absence of chlorine or other oxidants. For iodine concentration, multiply test results by 3.58. For bromine concentration, multiply test results by 2.25. Kits are also available for the direct measurement of iodine and bromine.

Test Kits

Description	Platform	Range	EPA Compliant	# Tests	Product Number
TEST KITS-LOW RANGE					
Free & Total Chlorine Test Kit (Model CN-66)	CD	0.1-3.5 mg/L Cl ₂		100 [†]	223101
Free Chlorine Test Kit (Model CN-66F)	CD	0.1-3.5 mg/L Cl ₂		100	223102
Total Chlorine Test Kit (CN-66T)	CD	0.1-3.5 mg/L Cl ₂		100	223103
Free Chlorine Test Kit (CN-70F)	CD	0.02-0.7 / 0.1-3.5 mg/L Cl ₂		200	1454201
Total Chlorine Test Kit (CN-70T)	CD	0.02-0.7 / 0.1-3.5 mg/L Cl ₂		200	1454202
Free & Total Chlorine Test Kit (Model CN-70)	CD	0.02-0.7 / 0.1-3.5 mg/L Cl ₂		100 [†]	1454200
Free & Total Chlorine Test Kit (Model CN-80)	CD	0.02-0.7/ 0.1-3.5/ 0.5-10 (Total only) mg/L Cl ₂		100 [†]	2129000
Free Chlorine Test Kit (AccuVac)	CD, AV	0.1-2.5 mg/L Cl ₂		25	2502050
Total Chlorine Test Kit (AccuVac)	CD, AV	0.1-2.5 mg/L Cl ₂		25	2503050
Free Chlorine Color Cube Kit	CC	0.5-2.5 mg/L Cl ₂		50	2060300
Total Chlorine Color Cube Kit	CC	0.5-2.5 mg/L Cl ₂		50	2060400
TEST KITS-MID AND HIGH RANGE					
Total Chlorine Test Kit (Model CN-65)	DCT	0.2-4/ 1-20 mg/L Cl ₂		100	225401
Total Chlorine Test Kit (Model CN-21P)	DCT	10-200 mg/L Cl ₂		100	2444400
Pocket Colorimeter™ II, Chlorine, Free & Total	PP	0.02-2.00/0.1-8.0 mg/L Cl ₂ Kit includes PC II	Yes	50-100	5870000
Pocket Colorimeter™ II, Chlorine, Free & Total & pH	PP	0.1-10.0 mg/L Cl ₂ ; 6.0-8.5 pH Kit includes PC II	Yes	100	5870012
Chlorine Test Kit (Model CN-DT)	DT	20-2,000 mg/L Cl ₂		100	2471100
CHLORINE, SWIFTEST™ DISPENSER KITS					
Pocket Colorimeter™ II, Free Chlorine	SW	0.02-2.00/0.1-8.0 mg/L Cl ₂ Kit includes PC II	Yes	125-250	5870023
Pocket Colorimeter™ II, Total Chlorine	SW	0.02-2.00/0.1-8.0 mg/L Cl ₂ Kit includes PC II	Yes	125-250	5870024

[†]50 tests each of Total and Free Chlorine.

Standards

Description	Volume	Concentration	Instruments	Product Number
Spec✓ Gel Secondary Standard Kit-LR Chlorine, DPD	Set of 4 Vials	0 - 2.0 mg/L Cl ₂	Includes values for all instruments	2635300
Spec✓ Gel Secondary Standard Kit-HR Chlorine, DPD	Set of 4 Vials	0 - 8.0 mg/L Cl ₂	Includes values for all instruments	2893300
Chlorine Standard Solution as Cl ₂ (NIST)	2 mL/ 20 PourRite Ampules	25-30 mg/L Cl ₂		2630020
Chlorine Standard Solution as Cl ₂ (NIST)	2 mL/ 20 PourRite Ampules	50-75 mg/L Cl ₂		1426820
Chlorine Standard Solution as Cl ₂ (NIST)	10 mL/ 16 Voluette Ampules	50-75 mg/L Cl ₂		1426810

PLATFORM KEY: AV=AccuVac®; CC=Color Cube; CD=Color Disc; DCT=Drop Count Titration; DT=Digital Titrator; EX=Extraction; IA=Immunoassay; PCII=Pocket Colorimeter™ II; PP=Powder Pillows; RL=Rapid Liquid; S=Solution; SP=Solution Pillow; SW=SwiftTest™; TNT=Test 'N Tube™; TNT+=TNTplus™; TRB=Turbidity; TS=Test Strip



CHLORINE

CL17 Chlorine Analyzer

- 0.035 to 5 mg/L range and automatic color/turbidity compensation
- Colorimetric DPD chemistry—fast, reliable, economical
- Unattended operation up to 30 days

Measuring Range	Accuracy	Cycle Time
0.035 to 5 mg/L free or residual chlorine	±5% or ±0.035 mg/L, whichever is greater	2.5 minutes

Prod. No.	Description
5440001	CL17 Free Residual Chlorine Analyzer
5440002	CL17 Total Residual Chlorine Analyzer
5449000	Calibration Verification Kit
2556900	Reagent Set, Chlorine, Free
2557000	Reagent Set, Chlorine, Total
2297255	DPD Indicator Powder (free and total), 24 g
2263411	Total Chlorine Indicator Solution, 473 mL
2263511	Total Chlorine Buffer Solution, 473 mL
2557000	Total Chlorine Reagent Set
2314011	Free Chlorine Indicator Solution, 473 mL
2314111	Free Chlorine Buffer Solution, 473 mL
2556900	Free Chlorine Reagent Set
2835900	Calibration Kit Refill

For more information request *FREE Literature*: #4369



Parameters

COD (Chemical Oxygen Demand)

Reagents



Description	Platform	Range	Instrument*	EPA Compliant	Digestion Required	# Tests	Product Number
COD DIGESTION VIALS—16 mm							
ULR PK/25	TNT/COD	0.7-40.0 mg/L	DR 5000, DR 2800		Yes	25	2415825
ULR PK/150	TNT/COD	0.7-40.0 mg/L	DR 5000, DR 2800		Yes	150	2415815
LR PK/25	TNT/COD	3-150 mg/L	DR 5000, DR 2800	Yes	Yes	25	2125825
LR PK/150	TNT/COD	3-150 mg/L	DR 5000, DR 2800	Yes	Yes	150	2125815
HR PK/25	TNT/COD	20-1,500 mg/L	DR 5000, DR 2800, DR/890, DR/850	Yes	Yes	25	2125925
HR PK/150	TNT/COD	20-1,500 mg/L	DR 5000, DR 2800 DR/890, DR/850	Yes	Yes	150	2125915
HR+ PK/25	TNT/COD	200-15,000 mg/L	DR 5000, DR 2800 DR/890, DR/850		Yes	25	2415925
HR+ PK/150	TNT/COD	200-15,000 mg/L	DR 5000, DR 2800 DR/890, DR/850		Yes	150	2415915
COD 2 DIGESTION VIALS—16 mm							
LR PK/25	TNT/COD	3-150 mg/L	DR 5000, DR 2800		Yes	25	2565025
HR PK/25	TNT/COD	20-1,500 mg/L	DR 5000, DR 2800 DR/890, DR/850		Yes	25	2565125
HR PK/150	TNT/COD	20-1,500 mg/L	DR 5000, DR 2800 DR/890, DR/850		Yes	150	2565115
UHR PK/25	TNT/COD	200-15,000 mg/L	DR 5000, DR 2800 DR/890, DR/850		Yes	25	2834325
COD TNTplus™—13 mm							
ULR PK/24	TNT+	1.0-60.0 mg/L	DR 5000, DR 2800		Yes	24	TNT820
LR PK/25	TNT+	3-150 mg/L	DR 5000, DR 2800	Yes	Yes	25	TNT821
LR PK/150	TNT+	3-150 mg/L	DR 5000, DR 2800	Yes	Yes	150	TNT82106
HR PK/25	TNT+	20-1,500 mg/L	DR 5000, DR 2800	Yes	Yes	25	TNT822
HR PK/150	TNT+	20-1,500 mg/L	DR 5000, DR 2800	Yes	Yes	150	TNT82206
UHR PK/25	TNT+	200-15,000 mg/L	DR 5000, DR 2800		Yes	25	TNT823

*Generally, the DR 5000 runs the same methods as the DR/4000. The DR 2800 runs the same methods as the DR/2500 and DR/2400. Some exceptions do exist.

Continued on next page.

To order, contact your local distributor or call in the USA 970-669-3050



COD (Chemical Oxygen Demand)

Standards

Description	Volume	Concentration	Product Number
COD Standard Solution (NIST)	200 mL	300 mg/L COD	1218629
COD Standard Solution (NIST)	500 mL	300 mg/L COD	1218649
COD Standard Solution (NIST)	200 mL	800 mg/L COD	2672629
COD Standard Solution (NIST)	200 mL	1,000 mg/L COD	2253929
Oxygen Demand, Mixed Parameter QC Standard; (BOD, COD, TOC)	10 mL/ 16 Volute Ampules	BOD - 396 mg/L BOD, COD - 617 mg/L COD, TOC - 242 mg/L TOC	2833510
Wastewater Influent Inorganics, Mixed Parameter QC Standard; (Ammonia, Nitrate, Phosphate, COD, Sulfate, TOC)	500 mL	Ammonia-15 mg/L $\text{NH}_3\text{-N}$; Nitrate-10 mg/L $\text{NO}_3\text{-N}$; Phosphate-10 mg/L PO_4^{3-} ; COD-500 mg/L COD; Sulfate-400 mg/L SO_4^{2-} ; TOC-161 mg/L TOC	2833149
Wastewater Effluent Inorganics, Mixed Parameter QC Standard; (Ammonia, Nitrate, Phosphate, COD, Sulfate, TOC)	500 mL	Ammonia- 2 mg/L $\text{NH}_3\text{-N}$; Nitrate- 4 mg/L $\text{NO}_3\text{-N}$; Phosphate- 2 mg/L PO_4^{3-} ; COD- 25 mg/L COD; Sulfate- 50 mg/L SO_4^{2-} ; TOC- 8 mg/L TOC	2833249

Accessories Required to Run Tests

Description	Product Number
DRB200 Reactor, multiple models available (To order, visit www.hach.com or contact your Hach representative.)	
Test Tube Rack, 16 mm	1864100
Test Tube Rack, 13 mm	2497900
Reactor Adapter, 16 mm to 13 mm, 5/pk (For use with older COD reactors with 16mm holes)	2895805

ez COD™ Recycling

NEW!

Hassle-free, economical COD disposal!

- Low Cost—Save up to 50% vs current disposal options
- Hassle Free—Place entire vial into receptacle
- Environmentally Friendly—Silver and Mercury are reclaimed
- One Stop Shopping—Order COD and recycling from one source



Introducing ez COD Recycling for Hach COD and COD 2!

COD analysis exposes your facility to a potentially hazardous by-product. On-site storage of large quantities can be dangerous, while outside disposal services can be expensive. With Hach ez COD, your facility receives a DOT approved recycling container, prepared handling documents and pre-paid transportation to a recycling facility for easy and environmentally sound reagent reclamation. All at a fraction of what other services charge.

Prod. No.	Description
2895405	5 Gallon Program Includes 5 gallon container, documentation and transportation to the recycling facility. 5 gallon holds approximately 400 16 mm COD vials or 650 13 mm TNTplus vials. (Maximum total weight of 25 lbs.)
2895420	20 Gallon Program Includes 20 gallon container, documentation and transportation to the recycling facility. 20 gallon holds approximately 1,600 16 mm COD vials or 2,600 13 mm TNTplus vials.
2895455	55 Gallon Program Includes 55 gallon container, documentation and transportation to the recycling facility. 55 gallon holds approximately 4,400 16mm COD vials or 7,150 TNTplus vials.



*For continental U.S. domestic customers only—not for Alaska and Hawaii.
Hazardous waste holding periods may apply. Check with your regulatory specialist.*

FLUORIDE

Hach's SPADNS Fluoride tests give you the simplicity and reliability you expect.

- Available in multiple reagent platforms (AccuVac® and bulk solution)
- EPA accepted, distillation required for reporting purposes
- Hach method can analyze samples with up to 5 mg/L chlorine with no interference
- Easy-to-use one reagent test



Parameters

Reagents

Description	Platform	Range	Instrument*	EPA Compliant	# Tests	Product Number
SPADNS Fluoride AccuVac	AV	0.02-2.00 mg/L F ⁻	All except DR/820	Yes [†]	25	2506025
SPADNS Reagent Solution, 500mL	S	0.02-2.00 mg/L F ⁻	All except DR/820	Yes [†]	125	44449
SPADNS Reagent Solution, 1,000mL	S	0.02-2.00 mg/L F ⁻	All except DR/820	Yes [†]	250	44453

ION SELECTIVE ELECTRODE METHOD

Fluoride Ionic Strength Adjuster Powder Pillows (TISAB)	PP	0.01 mg/L to saturated	sensION 4	Yes ^{††}	100	258999
Fluoride Ionic Strength Adjuster Solution (TISAB)	S	0.01 mg/L to saturated	sensION 4	Yes ^{††}	750	2829017

*Generally, the DR 5000 runs the same methods as the DR/4000. The DR 2800 runs the same methods as the DR/2500 and DR/2400. Some exceptions do exist.

[†]Methods on DR/890 and DR/850 are not EPA approved.

^{††}Drinking water only.

Test Kits

Description	Platform	Range	EPA Compliant	# Tests	Product Number
Pocket Colorimeter™ II – Fluoride	PCII, AV	0.1 - 2.0 mg/L ^{††}	Yes	50	5870005

^{††}Greater sensitivity (0.01 mg/L) is achieved by substituting bottled SPADNS reagent solution for the AccuVac® ampules provided in the kit.

Standards

Description	Volume	Concentration	Instrument	Product Number
Spec✓ Gel Secondary Standard Kit – Fluoride	Set of 4 Vials	0-2.0 mg/L F ⁻	Includes values for all instruments	2712500
Fluoride Standard Solution	500 mL	0.2 mg/L F ⁻		40502
Fluoride Standard Solution	500 mL	0.5 mg/L F ⁻		40505
Fluoride Standard Solution	500 mL	0.8 mg/L F ⁻		40508
Fluoride Standard Solution	500 mL	1.0 mg/L F ⁻		29149
Fluoride Standard Solution	1 L	1.0 mg/L F ⁻		29153
Fluoride Standard Solution	500 mL	1.2 mg/L F ⁻		40512
Fluoride Standard Solution	500 mL	1.5 mg/L F ⁻		40515
Fluoride Standard Solution	500 mL	2.0 mg/L F ⁻		40520
Fluoride Standard Solution	500 mL	5.0 mg/L F ⁻		2797149
Fluoride Standard Solution	500 mL	10 mg/L F ⁻		35949
Fluoride Standard Solution	500 mL	19 mg/L F ⁻		2126249
Fluoride Standard Solution	500 mL	100 mg/L F ⁻		23249
Drinking Water Inorganics, Mixed Parameter QC Standard; (Fluoride Nitrate, Phosphate, Sulfate)	500 mL	Fluoride- 1 mg/L F ⁻ ; Nitrate- 2 mg/L NO ₃ ⁻ -N; Phosphate- 2 mg/L PO ₄ ³⁻ ; Sulfate- 50 mg/L SO ₄ ²⁻		2833049

Accessories Required to Run Lab Test (When distillation is required for EPA reporting.)

Description	Product Number
Distillation Apparatus, General Purpose Accessories AND	2265300
Distillation Apparatus Heater, 115 Vac, 60 Hz OR	2274400
Distillation Apparatus Heater, 230 Vac, 50 Hz	2274402

See Procedure for additional common labware required for this test.

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To order, contact your local distributor or call in the USA 970-669-3050



HARDNESS

- Multiple titration and colorimetric methods available (Total or Calcium Hardness)
- A wide variety of reagent platforms available
- Calcium hardness methods (CalVer2) are highly sensitive and have sharp end points for accurate results
- Total hardness methods (Calmagite) are formulated for enhanced stability and are free from most interferences
- Ultra low range method (Chlorophosphonazo) developed specifically to be used with Hach spectrophotometers for ultrapure and boiler feed water analysis

**EPA
APPROVED**
WHERE INDICATED

Reagents

Description	Platform	Range	Instrument*	EPA Compliant	# Tests	Product Number
ULTRA LOW RANGE						
Ultra Low Range Hardness Reagent Set	S	4-1000 µg/L CaCO ₃	DR 5000, DR 2800		250	2603101
Set includes:						
Chlorophosphonazo Indicator Solution, 500 mL	S				250	2589549
CDTA Solution, 10 mL	S				100	2589636
Ultra Low Range Hardness Reagent Set	S	8-1000 µg/L CaCO ₃	DR 5000, DR 2800		100	2603100
Set includes:						
Chlorophosphonazo Indicator Solution Pillows	S				100	2589599
CDTA Solution, 10 mL	S				100	2589636
LOW RANGE						
COLORIMETRIC						
Hardness Reagent Set	S	0.05-4.00 mg/L Ca as CaCO ₃	All except PC II		100	2319900
Set includes:		0.05-4.00 mg/L Mg as CaCO ₃				
EGTA Solution, 50 mL	S				100	2229726
Alkali Solution, 100 mL	S				100	2241732
Calcium/ Magnesium Indicator, 100 mL	S				100	2241832
EDTA Solution, 1 M, 50 mL	S				100	2241926
DIGITAL TITRATOR TITRATION						
Hardness Reagent Set (Calcium LR)	DT	10-160 mg/L CaCO ₃			100	2447200
Set includes:						
Potassium Hydroxide 8 N, 100 mL	S				100	28232H
CalVer 2 Powder Pillows	PP				100	85299
TitraVer EDTA 0.0800 M Cartridge	DT				40-100	1436401
Hardness Reagent Set (Total LR)	DT	10-160 mg/L CaCO ₃			100	2448000
Set includes:						
Hardness 1 Buffer Solution, 100 mL	S				100	42432
ManVer 2 Powder Pillows	PP				100	85199
TitraVer EDTA 0.0800 M Cartridge	DT				40-100	1436401
BURET TITRATION						
Hardness Reagent Set (Total LR)	PP, S	0-2500 mg/L CaCO ₃		Yes [†]	100	2447600
Set includes:						
Hardness 1 Buffer Solution, 100 mL	S				100	42432
ManVer 2 Powder Pillows	PP				100	85199
EDTA Standard Solution 0.0200 N, 1 L	S				40-100	20553
HIGH RANGE						
DIGITAL TITRATOR TITRATION						
Hardness Reagent Set (Calcium HR)	DT	100-4000 mg/L CaCO ₃			100	2447500
Set includes:						
Potassium Hydroxide 8 N, 100 mL	S				100	28232H
CalVer 2 Powder Pillows	PP				100	85299
TitraVer EDTA 0.800 M Cartridge	DT				40-100	1439901
Hardness Reagent Set (Total HR)	DT	100-4000 mg/L CaCO ₃			100	2448100
Set includes:						
Hardness 1 Buffer Solution, 100 mL	S				100	42432
ManVer 2 Powder Pillows	PP				100	85199
EDTA Standard Solution 0.800 M, Cartridge	DT				40-100	1439901
BURET TITRATION						
Hardness Reagent Set (Calcium HR)	PP, S	0-5000 mg/L CaCO ₃		Yes [†]	100	2447000
Set includes:						
Potassium Hydroxide 8 N, 100 mL	S				100	28232H
CalVer 2 Powder Pillows	PP				100	85299
EDTA Standard Solution, 0.0200 N, 1 L	S				40-100	20553
Hardness Reagent Set (Total HR)	PP, S	100-25000 mg/L CaCO ₃		Yes [†]	100	2447700
Set includes:						
Hardness 1 Buffer Solution, 100 mL	S				100	42432
ManVer 2 Powder Pillows	PP				100	85199
EDTA Standard Solution, 0.200 N, 500 mL	S				40-100	102149

*Generally, the DR 5000 runs the same methods as the DR/4000. The DR 2800 runs the same methods as the DR/2500 and DR/2400. Some exceptions do exist.

[†]Equivalent to EPA Reference Method 215.2 as per the Guide to Method Flexibility and Approval of EPA Water Methods, US Environmental Protection Agency, Engineering and Analysis Division, Office of Science and Technology, Office of Water, Washington, DC., Draft, December 1996.

Continued on next page.

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HARDNESS

Reagents (Continued)

Description	Platform	Range	Instrument*	# Tests	Product Number
TITRANTS, BUFFERS, INDICATORS					
EDTA Standard Solution, 0.200N, 500 mL, Titrant	S	1,000-25,000 mg/L CaCO ₃			102149
EDTA Standard Solution, 0.0200N, 1 L, Titrant	S	0-2,500 mg/L CaCO ₃			20553
EDTA Standard Solution, 0.0200N, 4 L, Titrant	S	0-2,500 mg/L CaCO ₃			20556
TitraVer EDTA 0.0800M, Titrant cartridge	DT	10-160 mg/L CaCO ₃			1436401
TitraVer EDTA 0.800M, Titrant cartridge	DT	100-4,000 mg/L CaCO ₃			1439901
Hardness 1 Buffer Solution, 100 mL, Buffer	S				42432
Hardness 1 Buffer Solution, 500 mL, Buffer	S				42449
Hardness 2 Test Solution, 100 mL MDB, Indicator	S				42532
Hardness 2 Test Solution, 500mL	S				42549
Hardness 3 Test Solution, Titrant 1L	S				42653
Hardness 3 Test Solution, 500mL	S				42649
ManVer 2 Hardness Indicator	PP			100	85199

*Generally, the DR 5000 runs the same methods as the DR/4000. The DR 2800 runs the same methods as the DR/2500 and DR/2400. Some exceptions do exist.

Test Strips



MOST POPULAR!

Description	Platform	Range	# Tests	Product Number
Total Hardness Test Strips (as CaCO ₃)	TS	0-425 ppm, 0-25 gpg (0, 25, 50, 120, 250, 425 steps)	1,000 [†]	2793828
Total Hardness Test Strips (as CaCO ₃)	TS	0-425 ppm, 0-25 gpg (0, 25, 50, 120, 250, 425 steps)	250 [†]	2793844
Total Hardness Test Strips (as CaCO ₃)	TS	0-425 ppm, 0-25 gpg (0, 25, 50, 120, 250, 425 steps)	50	2745250

[†]Individually wrapped.

Test Kits

Description	Platform	Range	# Tests	Product Number
HARDNESS, TOTAL				
Total Hardness Test Kit (Model 5-B)	DCT	1-30 gpg CaCO ₃	100	145300
Total Hardness Test Kit (Model HA-71A)	DCT	1-20 mg/L + 1-20 gpg CaCO ₃	100	145201
Total Hardness Test Kit (Model 5-EP)	PP	1-30 gpg CaCO ₃ (Powder Pillow Reagents)	100	145400
Total Hardness Test Kit (Model 5-EP, MG-L)	DCT	20-400 mg/L CaCO ₃	100	145401
Total Hardness Test Kit (Model HA-DT)	DT	10-4,000 mg/L	50	2063600
HARDNESS, TOTAL & CALCIUM				
Total Calcium Hardness Test Kit (Model HA-4P)	DCT	1-20 gpg CaCO ₃	100	145700
Total Calcium Hardness Test Kit (Model HA-4P, MG-L)	DCT	20-400 mg/L CaCO ₃	100	145701
Total Calcium Hardness Test Kit (Model HAC-DT)	DT	10-4,000 mg/L CaCO ₃	100 Ca, +100 T	2063900

Standards

Description	Volume	Concentration	Product Number
Hardness Standard Solution (NIST)	946 mL	0.50 mg/L CaCO ₃	2058016
Hardness Standard Solution (NIST)	946 mL	2.0 mg/L CaCO ₃	2058116
Hardness Standard + Iron Solution as CaCO ₃ (NIST)	500 mL	20 gpg (340 mg/L) + 2 mg/L Fe	47949
Hardness Standard Solution as CaCO ₃ (NIST)	10 mL/ 16 Voluette Ampoules	10,000 mg/L	218710
Low Range Hardness, Mixed Parameter QC Standard; (Total Hardness, Calcium Hardness)	500 mL	Total Hardness- 100 mg/L CaCO ₃ ; Calcium Hardness- 50 mg/L CaCO ₃	2833449
High Range Hardness, Mixed Parameter QC Standard; (Total Hardness, Calcium Hardness)	500 mL	Total Hardness- 1,000 mg/L CaCO ₃ ; Calcium Hardness- 500 mg/L CaCO ₃	2833349
Magnesium, Hardness, Standard Solutions, 100 mL	S	1,000 mg/L Mg	1479442

Accessories Required to Run Tests

Description	Product Number
Digital Titrator	1690001
Buret, Class A, 25 mL	2636540
Buret, Class A, 50 mL	2636541

PLATFORM KEY: AV=AccuVac®; CC=Color Cube; CD=Color Disc; DCT=Drop Count Titration; DT=Digital Titrator; EX=Extraction; IA=Immunoassay; PCIL=Pocket Colorimeter™ II; PP=Powder Pillows; RL=Rapid Liquid; S=Solution; SP=Solution Pillow; SW=SwiftTest™; TNT=Test 'N Tube™; TNT+=TNTplus™; TRB=Turbidity; TS=Test Strip

To order, contact your local distributor or call in the USA 970-669-3050



An Understanding of Iron—It's Forms and Analysis Methods

Hach Company offers the following guidance for selecting the right iron method for your application.

Ferrous Iron Reagent

Determines iron in the ferrous (Fe^{2+}) form. Digestion or other sample pretreatment may cause ferrous iron to be lost.

FerroVer[®] Iron Reagent

For determination of total soluble iron including all ferric (Fe^{3+}) and ferrous iron (Fe^{2+}) as well as complexed iron compounds (Fe-EDTA). EPA approved for reporting total iron when an acid digestion is used. Total FerroVer – Ferrous Iron = Ferric Iron. Perfect for many applications and a wide range of concentrations. Determines iron in the presence of copper.

TPTZ Iron Reagent

More sensitive than FerroVer. Not EPA accepted.

FerroZine[™] Iron Reagent

Determines soluble ferric (Fe^{3+}) and ferrous (Fe^{2+}) iron. Digestion is needed for strongly chelated iron complexes (such as those with EDTA) and Total Iron. Use where trace level iron analysis is required.

FerroMo[™] Iron Reagent

Determines iron in the presence of molybdenum compounds in cooling tower waters. Eliminates the reduction of molybdenum which forms a black solution. No pretreatment necessary. Available as a two-powder pillow reagent system.

Iron Titration Method

Determines high levels of soluble ferrous (Fe^{2+}) and ferric (Fe^{3+}) iron in industrial or oil field applications, usually without any sample pretreatment. Uses three unit-dose powder reagents and a Digital Titrator titration cartridge.

With Hach iron methods you have the assurance that you have the right test, no matter what the application.

- Complete product offering for a wide range of applications
- EPA-approved FerroVer[®]

- FerroZine[™] used for trace levels of iron
- Multiple reagent platforms



Reagents

Description	Platform	Range	Instrument*	EPA Compliant	# Tests	Product Number
COLORIMETRIC						
FerroMo Reagent Set	PP	0.01-1.80 mg/L Fe	DR 5000, DR 2800 DR/890, DR/850		100	2544800
Set includes:						
FerroMo Iron Reagent 1 Powder Pillows	PP				25	2543768
FerroMo Iron Reagent 2 Powder Pillows	PP				50	2543866
Ferrous Iron Powder Pillows	PP	0.02-3.00 mg/L Fe^{2+}	All except PC II		100	103769
Ferrous Iron AccuVac	AV	0.02-3.00 mg/L Fe^{2+}	All except PC II		25	2514025
FerroVer Iron Reagent Powder Pillow, 5 mL	PP	0 - 2.0 mg/L Fe	Test Kit	Yes	100	92799
FerroVer Iron Reagent Powder Pillow, 5 mL	PP	0 - 2.0 mg/L Fe	Test Kit	Yes	1,000	92728
FerroVer Iron Reagent Powder Pillow, 10 mL	PP	0.02-3.00 mg/L Fe	All	Yes	100	2105769
FerroVer Iron Reagent Powder Pillow, 10 mL	PP	0.02-3.00 mg/L Fe	All	Yes	1,000	2105728
FerroVer AccuVac	AV	0.02-3.00 mg/L Fe	All	Yes	25	2507025
TPTZ Iron Reagent Powder Pillow, 10 mL	PP	0.012-1.800 mg/L Fe	All except DR/820		100	2608799
TPTZ Iron Reagent AccuVac	AV	0.012-1.800 mg/L Fe	All except DR/820		25	2510025
FerroZine Iron Reagent Solution, 500 mL	S	0.009-1.400 mg/L Fe	DR 5000, DR 2800 DR/890		1,000	230149
FerroZine Iron Reagent Solution Pillows	SP	0.009-1.400 mg/L Fe	DR 5000, DR 2800 DR/890		50	230166
FerroVer Iron Reagent Powder Pillow, 25 mL	PP	0.02-3.00 mg/L Fe	For older instruments		100	85499
FerroVer Iron Reagent Powder Pillow, 25 mL	PP	0.02-3.00 mg/L Fe	For older instruments		1,000	85428
TPTZ Iron Reagent Powder Pillows, 25 mL	PP	0.012-1.800 mg/L Fe	For older instruments		100	2275699

DIGITAL TITRATOR TITRATION

Iron Reagent Set, Digital Titrator	DT	10-100 mg/L Fe			100	2449200
Set includes:						
Citrate Buffer Powder Pillows for Iron	PP				100	2081599
Sulfosalicylic Acid Powder Pillows	PP				100	2081669
TitraVer EDTA Cartridge, 0.0716 M	DT				40-100	2081701
Sodium Periodate Powder Pillows	PP				100	98499
Iron Reagent Set, Digital Titrator	DT	100-1000 mg/L Fe			100	2449300
Set includes:						
Citrate Buffer Powder Pillows for Iron	PP				100	2081599
Sulfosalicylic Acid Powder Pillows	PP				100	2081669
TitraVer EDTA Cartridge, 0.716 M	DT				40-100	2081801
Sodium Periodate Powder Pillows	PP				100	98499

*Generally, the DR 5000 runs the same methods as the DR/4000. The DR 2800 runs the same methods as the DR/2500 and DR/2400. Some exceptions do exist.

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IRON

Test Strips

Description	Platform	Range	# Tests	Product Number
Iron Test Strips, Total Dissolved Iron	TS	0-5 ppm Fe (0, 0.15, 0.3, 0.6, 1, 2, 5 steps)	25	2745325

Test Kits

Description	Platform	Range	EPA Compliant	# Tests	Product Number
Pocket Colorimeter™ II – Iron, FerroVer®	PCII, PP	0.02-5.00 mg/L Fe Kit includes PC II	Yes	100	5870022
Pocket Colorimeter™ II – Iron, TPTZ	PCII, PP	0.01-1.70 mg/L Fe Kit includes PC II		100	5870016
Iron Test Kit, Low Range (Model IR-24)	CD	0.002-0.200; 0.01-1.00 mg/L Fe		100	255600
Iron Test Kit, Low Range (Model IR-21)	CD	0.01-0.10, 0.05-1.20 mg/L Fe		100	2299300
Iron Test Kit (Model IR-18)	CD	0.1-5 mg/L Fe		100	146400
Iron Test Kit (Model IR-18A)	CD	0.02-1.00 mg/L Fe		100	146500
Iron Test Kit (Model IR-18B)	CD	0.2-10 mg/L Fe		100	146401
Iron Test Kit (Model IR-18C)	CD	0.2-10.0 Fe ²⁺		100	2667200
Iron Test Kit	CC	1-5 mg/L Fe		50	1400800
Iron Test Kit	CC	2-10 mg/L Fe		50	2543500
Iron Test Kit (AccuVac)	CD, AV	0.2-10.0 mg/L Fe		25	2507050

Standards

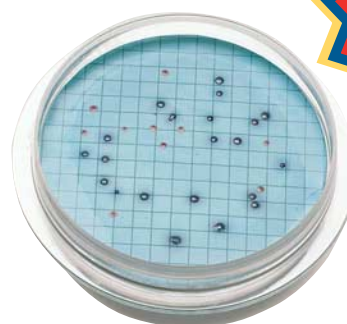
Description	Volume	Concentration	Product Number
Spec✓ Gel Secondary Standard Kit-Iron, FerroVer	Set of 4 vials	0 - 3.0 mg/L Fe	2707400
Iron Standard Solution as Fe (NIST)	500 mL	1 mg/L Fe	13949
Iron Standard Solution as Fe (NIST)	500 mL	10 mg/L Fe	14049
Iron Standard Solution as Fe (NIST)	10 mL/ 16 Voluette Ampules	25 mg/L Fe	1425310
Iron Standard Solution as Fe (NIST)	2 mL/ 20 Voluette Ampules	50 mg/L Fe	1425420
Iron Standard Solution as Fe (NIST)	10 mL/ 16 Voluette Ampules	50 mg/L Fe	1425410
Iron Standard Solution as Fe (NIST)	100 mL	100 mg/L Fe	1417542
Iron Standard Solution as Fe (NIST)	100 mL	1,000 mg/L Fe	227142
Iron Standard Solution as Fe (NIST)	2 mL/20 Voluette Ampules	25 mg/L Fe	2462920
Metals Drinking Water (Low Range) Mixed Parameter QC Standard; (Copper, Iron, Manganese)	500 mL	Copper-1.0 mg/L Cu; Iron-0.3 mg/L Fe; Manganese-0.1 mg/L Mn	2833749
Metals Drinking Water (High Range) Mixed Parameter QC Standard; (Copper, Iron, Manganese)	500 mL	Copper- 2.5 mg/L Cu, Iron-1.5 mg/L Fe, Manganese- 5.0 mg/L Mn	2833649

MICROBIOLOGICAL

Prepared Media for Membrane Filtration

Convenient, efficient premeasured media for food/beverage, potable water, and wastewater monitoring.

Application	Media Description	# Tests	Prod. No.
Total coliforms and <i>E. coli</i>	m-ColiBlue24® plastic ampule glass ampule glass bottle	pk/50 pk/20 100 mL	2608450 2608420 2608442
Beverage Analysis	m-Green Yeast and Mold glass ampule plastic ampule	pk/50 pk/20	2428350 2428320
Enumeration of fecal streptococci in foods	KF Streptococci plastic ampule	pk/50	2812750
Heterotrophic Plate Count (also known as Standard Plate Count)	m-HPC plastic ampule m-HPC Agar Plates (47 mm) plastic plate	pk/50 pk/15	2812450 2811415



m-ColiBlue24® Broth simultaneously detects total coliforms and E. coli in just 24 hours.

Approved for compliance with NEW EPA Wastewater Rule*

Also EPA approved for: Drinking Water and Ambient Recreational Water

*The EPA has approved m-ColiBlue24 to support the NEW Rule at 40 CFR 136, Guidelines Establishing Test Procedures for the Analysis of Pollutants; Analytical Methods for Biological Pollutants in Wastewater and Sewage Sludge. Rule promulgation in wastewater will occur in 2007. In support of this Rule, many States have begun to require reporting of E. coli.

To order, contact your local distributor or call in the USA 970-669-3050



Presence-Absence



Hach's EPA-approved disposable P-A Test is an effective analysis tool.



In liquids or on surfaces, Hach Paddle Testers make bacterial screening a snap!



With ten BART™ Biodetectors to choose from, you can easily determine the group of bacteria responsible for growth problems.

Presence-Absence Media

Type of Organism	Media Description	# Tests	Product Number
Total Coliforms			
	Presence-Absence Broth (Sterile bottle)	pk/12	2323212
	P-A Broth (Sterile bottle)	pk/50	2323250
	P-A Broth (ampule)	pk/25	2494925
Total Coliforms and <i>E. coli</i>			
	P-A broth with MUG (Sterile bottle)	pk/12	2401612
	P-A broth with MUG (Sterile bottle)	pk/50	2401650
	P-A broth with MUG (Ampule)	pk/25	2495525

Paddle Testers (Dip Slides)

Easy-to-use format for monitoring aerobic bacteria, total coliforms, yeast and molds, and surface disinfection practices

Type of Organism	Media Description	# Tests	Product Number
Total Aerobic Bacteria/Yeast & Mold	Tryptone Glucose Extract Agar/Sabouraud Dextrose Agar	pk/10	2610810
Total Aerobic Bacteria/Total Coliform Red Bile Agar	Tryptic Soy Agar (TSA)/Violet	pk/10	2610910
Total Aerobic Bacteria/Disinfection Control	TSA/DE Neutralizing Agar	pk/10	2619510

Biological Activity Reaction Test (BART™)

For population estimation, biocide control and aggressivity monitoring of industrial waters prone to biofouling, taste and odor problems, integrity and hygiene issues

Type of Microorganism	Organisms Detected	# Tests	Product Number
Acid Producing Bacteria (APB)	Bacterial strains capable of acid production under reductive (oxygen-deprived) conditions	pk/9	2831409
Blue Green Algae (ALGE)	Photosynthetic plant-like microorganisms; <i>Chlorophyceae</i> , <i>Cyanobacteria</i> , desmids, diatoms and euglenoids	pk/9 pk/27	2432709 2432727
Denitrifying Bacteria (DN)	Nitrate reducing bacterial strains	pk/9	2619309
Fluorescing Pseudomonads (FLOR)	Fluorescing pseudomonad strains and related bacteria	pk/9	2432609
Heterotrophic Aerobic Bacteria (HAB)	Broad spectrum of aerobic bacteria	pk/9 pk/27	2490409 2490427
Iron Related Bacteria (IRB)	Iron-related bacterial populations of oxidizing, reducing, and "accumulating" strains	pk/9 pk/27	2432309 2432327
Nitrifying Bacteria (NB)	Ammonium oxidizing strains	pk/7	2619407
Pool and Spa Bacteria (POOL)	Problematic pool and spa bacteria; <i>Pseudomonas</i> strains	pk/9	2478409
Slime Forming Bacteria (SLYM)	Aerobic/Anaerobic slime producing bacteria; <i>Pseudomonads</i>	pk/9 pk/27	2432509 2432527
Sulfate-Reducing Bacteria (SRB)	Anaerobic and aerobic hydrogen sulfide generating bacterial strains	pk/9 pk/27	2432409 2432427
Combination Pack: 3 each of IRB/SRB/SLYM (COMB)	Convenient multi-pack for detection of iron-related, sulfate reducing, and slime forming bacteria	pk/9	2434809

Ready-to-Use Media for Regulatory Reporting

Hach's ready-to-use media eliminates measuring, mixing, and autoclaving steps necessary to prepare dehydrated media. Glass ampules, plastic ampules, 100 mL bottles of m-ColiBlue24® and m-Endo, and agar plates, afford maximum shelf life and ease of use for pre-measured and prepared media.

Hach offers prepared media for MF, P-A, and MPN methods in a variety of formats. Microbiology chemicals and reagents, as well as dehydrated media are available along with instruments, apparatus, and labware for all your microbiological testing needs.

Drinking Water - Regulatory Information

Parameter	Method (Method)*	Citations	Hach Method	Packaging	Product Number
Coliform Bacteria, Total and <i>E. coli</i>	m-ColiBlue24 (MF)	40CFR 141.21 (f) (3) footnote (11)	8433	Glass Ampules, pk/20	2608420
				Plastic Ampules, pk/50	2608450
				100 mL Bottle, ea	2608442
Coliform Bacteria, Total	Lauryl Tryptose Broth (MPN; presumptive) and Brilliant Green Bile Broth (MPN; confirmed)	SM 18th 9221 A-B-C	8001	MPN Tube, pk/15	2101415
				MPN Tube, pk/15	32215
Coliform Bacteria, Fecal	Lauryl Tryptose (MPN; presumptive) and EC (MPN; confirmed)	40CFR 141.21 (f) (5)	8001	MPN Tube, pk/15	2101415
				MPN Tube, pk/15	1410415
Coliform Bacteria, <i>E. coli</i>	Lauryl Tryptose Broth (MPN presumptive) and EC w/MUG (MPN; confirmed)	40CFR 141.21 (f) (6) (i) SM 18th 9221 A-B-F	8001	MPN Tube, pk/15	2101415
				MPN Tube, pk/15	2471515
Coliform Bacteria, Total	Lauryl Tryptose/Bromcresol Purple Medium (PA; presumptive)	40CFR 141.21 (f) (3) SM 18th 9221 D	10018	P/A Broth Disp Bottle pk/12	2323212
				P/A Broth Disp Bottle pk/50	2323250
	Brilliant Green Bile Broth Medium (PA; Confirmed)			MPN Tube, pk/15	32215
Coliform Bacteria, Fecal	EC Medium (PA; Confirmed)	40CFR 141.21 (f) (5) SM 18th 9221 D	10018	MPN Tube, pk/15	1410415
Coliform Bacteria, <i>E. coli</i>	EC Medium w/MUG (PA; confirmed)	40CFR 141.21 (f) (6) (i) SM 18th 9221 D	10018	MPN Tube, pk/15	2471515
Coliform Bacteria, Total	m-ENDO Broth (MF; presumptive)	SM 18th 9222 A, B	8074	Glass Ampules, pk/20	2373520
				Plastic Ampules, pk/50	2373550
				100 mL Bottle, ea	2373542
				Agar Plate, pk/15	2811615
				Confirm with Lauryl Tryptose and Brilliant Green Bile Broth	2101415
Heterotrophic Plate Count	Plate Count Agar (Pour plate)	SM 18th 9215 A, B	8074	Sterile agar in tube (two tests per tube) pk/20	2406720
Heterotrophic Plate Count	m-HPC (MF)	SM 18th 9215 A, D	8074	Plastic Ampules, pk/50	2812450
				Agar Plate, pk/15	2811415
Heterotrophic Plate Count	m-R2A (MF)	SM 18th 9215 A, D	8074	Plastic Ampules, pk/50	2812350
				Agar Plate, pk/15	2814215
				Sterile Agar in tube (two tests per tube) pk/6	2724106

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Source and Ambient/Recreational Water

Parameter	Method (Method)*	Citations	Hach Method	Packaging	Product Number
Coliform Bacteria, <i>E. coli</i>	m-ColiBlue24 (MF)	40 CFR136.3	10029	Glass Ampules, pk/20	2608420
				Plastic Ampules, pk/50	2608450
				100 mL Bottle, ea	2608442
Coliform Bacteria, <i>E. coli</i>	Lauryl Tryptose Broth (MPN presumptive) and EC w/MUG (MPN; confirmed)	Federal Register V 68; #139 (7/21/2003)	8001A	MPN Tube, pk/15	2101415
				MPN Tube, pk/15	2471515
Coliform Bacteria, <i>E. coli</i>	Lauryl Tryptose Broth (MPN; presumptive) and Brilliant Green Bile Broth (MPN; confirmed)	Federal Register V 68; #139 (7/21/2003)	8001A	MPN Tube, pk/15	2101415
				MPN Tube, pk/15	32215
Coliform Bacteria, <i>E. coli</i>	Modified m-TEC Agar (MF: one-step confirmed)	Federal Register V 68; #139 (7/21/2003)	8074	Agar Plate, pk/15	2811815
				Agar Plate, bulk	2811801†
Coliform Bacteria, <i>E. coli</i>	m-TEC Agar (MF: two-step confirmed)	Federal Register V 68; #139 (7/21/2003)	8367	Sterile agar in tube (two tests per tube) pk/6	2561106
Coliform Bacteria, Fecal	A1 Medium (MPN; confirmed)	40CFR 141.74 footnote (7)	8368	MPN Tube, pk/15	2560915
Coliform Bacteria, Fecal	Lauryl Tryptose (MPN; presumptive) and EC (MPN; confirmed)	Federal Register V 68; #139 (7/21/2003)	8001A	MPN Tube, pk/15	2101415
				MPN Tube, pk/15	1410415
Coliform Bacteria, Fecal	mFC (MF: one-step confirmed) #139 (7/21/2003)	Federal Register V 68; #139 (7/21/2003)	8074	Glass Ampules, pk/20	2373220
				Plastic Ampules, pk/50	2373250
				Agar Plate, pk/15	2811515
				Agar Plate, bulk	2811501†
Coliform Bacteria, Total	mEndo (MF: one-step confirmed)	Federal Register V 68; #139 (7/21/2003)	8074	Glass Ampules, pk/20	2373520
				Plastic Ampules, pk/50	2373550
				Agar Plate, pk/15	2811615

†Minimum order of 100 plates required.



Wastewater and Biosolids

Parameter	Method (Method)*	Citations	Hach Method	Packaging	Product Number
Coliform Bacteria, <i>E. coli</i>	m-ColiBlue24 (MF)	Federal Register V 70, # 157 (08/16/2005); Federal Register V 71, # 69 (04/11/2006)	10029	Glass Ampules, pk/20	2608420
				Plastic Ampules, pk/50	2608450
				100 mL Bottle, ea	2608442
Coliform Bacteria, Total	Lauryl Tryptose Broth (MPN; presumptive) and Brilliant Green Bile Broth (MPN; confirmed)	SM 18th 9221 B	8001A	MPN Tube, pk/15	2101415
				MPN Tube, pk/15	32215
Coliform Bacteria, Fecal	Lauryl Tryptose Broth (MPN; presumptive) and EC Medium (MPN; confirmed)	SM 18th 9221 C, E	8001A	MPN Tube, pk/15	2101415
				MPN Tube, pk/15	1410415
Coliform Bacteria, Fecal	m-FC Medium (MF; confirmed)	40CFR 141.21 (f) (5) SM 18th 9222 D	8074	Glass Ampules, pk/20	2373220
				Plastic Ampules, pk/50	2373250
				Agar Plate, pk/15	2811515
Coliform Bacteria, Fecal	m-FC Medium w/Rosalic Acid (MF; confirmed)	40CFR 141.21 (f) (6) (i) SM 18th 9221 D	8074	Glass Ampules, pk/20	2428520
				Plastic Ampules, pk/50	2428550
Coliform Bacteria, Fecal	A1 Medium (MPN; confirmed)	40CFR 141.74 footnote (7) SM 9221E	8368	MPN Tube, pk/15	2560915
Coliform Bacteria, Fecal (BioSolids)	Lauryl Tryptose (MPN; presumptive) and EC (MPN; confirmed)	CFR 503 SM9221D	10027	MPN Tube, pk/15	2101415
				MPN Tube, pk/15	1410415
Coliform Bacteria, Fecal (BioSolids)	A1 Medium (MPN; confirmed)	CFR 503 SM9221D	10028	MPN Tube, pk/15	2560915

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OZONE

- Easy-to-use AccuVac® reagents are ideally suited for ozone analysis
- Indigo Trisulfonate Method

- Multiple ranges available
- Hach's reagent formulation prevents chlorine interference

Reagents

Description	Platform	Range	Instrument*	# Tests	Product Number
Ozone AccuVac	AV	0.01-0.25 mg/L O ₃	All except DR/820	25	2516025
Ozone AccuVac	AV	0.01-0.75 mg/L O ₃	All except DR/820	25	2517025
Ozone AccuVac	AV	0.01-1.50 mg/L O ₃	All except DR/820, PC II	25	2518025

*Generally, the DR 5000 runs the same methods as the DR/4000. The DR 2800 runs the same methods as the DR/2500 and DR/2400. Some exceptions do exist.

Test Kits

Description	Platform	Range	# Tests	Product Number
Pocket Colorimeter™ II – Ozone	PCII, AV	0.01-0.25 / 0.01-0.75 mg/L O ₃ Kit includes PC II	50	5870004
Ozone Test Kit (AccuVac) Indigo Method	AV, CD	0.01-0.30 mg/L O ₃	25	2516050
Ozone Test Kit (AccuVac) Indigo Method	AV, CD	0.02-0.80 mg/L O ₃	25	2517050
Ozone Test Kit (AccuVac) Indigo Method	AV, CD	0.05-1.6 mg/L O ₃	25	2518050
Ozone Test Kit (Model OZ-2), DPD Method	CD	0.05-2.30 mg/L O ₃	100	2064400

Standards

Description	Volume	Concentration	Instrument	Product Number
Spec✓ Gel secondary standard kit – Ozone MR	Set of 4 vials	0 - 0.75 mg/L O ₃	Includes values for all instruments	2708000



Ozone and Fluoride AccuVac® Ampules

PLATFORM KEY: AV=AccuVac®; CC=Color Cube; CD=Color Disc; DCT=Drop Count Titration; DT=Digital Titrator; EX=Extraction; IA=Immunoassay; PCII=Pocket Colorimeter™ II; PP=Powder Pillows; RL=Rapid Liquid; S=Solution; SP=Solution Pillow; SW=Swiftest™; TNT=Test 'N Tube™; TNT+=TNTplus™; TRB=Turbidity; TS=Test Strip

To order, contact your local distributor or call in the USA 970-669-3050



Pocket Colorimeter™ II



Portable, Rugged, Waterproof Analysis



NEW!

The optional soft-sided case/holster holds the Pocket Colorimeter, two vials, and powder pillows!

Prod. No.	Description
INSTRUMENT	
5870000	Pocket Colorimeter II Chlorine, Free & Total, DPD 0.02-2.00/0.1-8.0 mg/L, 50-100 Tests
REAGENTS	
2105569	Free Chlorine, 10-mL Powder Pillows, Pk/100
2105669	Total Chlorine, 10-mL Powder Pillows, Pk/100
ACCESSORIES	
5953100	Pocket Colorimeter™ II Soft-Sided Case/Holster

HOW TO REACH THE INTERNATIONAL DEPARTMENT

**Orders • Quotations • Products and Procedures • Claims and Returns
Instrument Service (except Canada*) • Free Technical Literature**

U.S. exporters and customers in the United States, Canada, Latin America, Africa, Asia, and Australia/New Zealand contact:

Hach Company World Headquarters
P.O. Box 389
Loveland, CO 80539-0389
U.S.A.

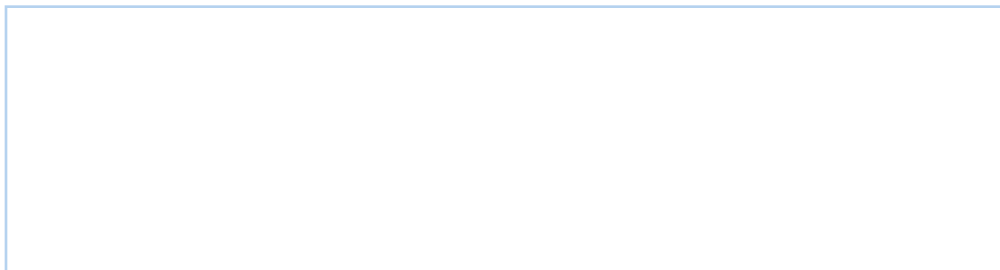
Telephone: 970-669-3050
800-227-4224 (U.S. callers)
Fax: 970-461-3939
E-mail: intl@hach.com
www.hach.com

1. If you are calling Hach from outside the United States, dial 970-669-3050, press 0 and ask for International Operations.
2. If you are calling from inside the United States, call 800-227-4224

**For instrument service in Canada, use the number below.*

Hach Sales & Service Canada Ltd.
1313 Border Street, Unit 34
Winnipeg, Manitoba R3H 0X4
Telephone: 1-800-665-7635, 1-204-632-5598
Fax: 1-204-694-5134

FOR MORE INFORMATION CONTACT YOUR LOCAL DISTRIBUTOR



Be Right™

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