The H-Series benchtop meters are dual-technology pH (non-glass "ISFET" and traditional glass). These professional meter systems showcase a large LCD display with LED backlight, and have the ability to accurately measure pH (ISFET or glass), mV, Temperature, ORP, and ISE. These benchtop meters are engineered to give years of reliable service in the most difficult of applications.

H260G Benchtop pH, mV, ORP, and ISE Meter

Bluetooth Optional

All benchtop meters include:

- *Dual Technology pH with either stainless steel, non-glass ISFET probes or traditional glass electrodes with BNC connector*
- *-2 to +19 pH range*
- *0.1 or 0.01 pH resolution*
- *Up to five point pH calibration*
- *Automatic or manual temperature compensation*
- *Stores 999 data points*
- *ISE capability*

NEW!

Prod. No.	Description
H260G-BNDL	H260G meter with PH77-SS ISFET pH Probe, USB Cord, AC Adapter, and SmartLogger II Software, PLUS consumables
H260GB-BNDL	H260G Bluetooth meter with PH77-SS ISFET pH Probe, Calibrating Buffer Kit, USB Cord, AC Adapter, and SmartLogger II Software, PLUS consumables

Prod. No.	Description
H260GNP	H260G meter only, USB Cord, AC Adapter, and SmartLogger II Software
H260GBNP	H260G meter only with Bluetooth, USB Cord, AC Adapter, and SmartLogger II Software

H270G Benchtop pH, mV, ORP, Conductivity, TDS, Salinity, and ISE Meter

H270G meter has all the features of the H260G plus:

- *Automatic conductivity cell constant recognition*
- *Five point conductivity calibration*

NEW!

Prod. No.	Description
H270G-BNDL	H270G meter with PH77-SS ISFET pH Probe, CDW97-KP5 Conductivity Probe, USB Cord, AC Adapter, and SmartLogger II Software, PLUS consumables
H270GB-BNDL	H270G Bluetooth meter with PH77-SS ISFET pH Probe, CDW97-KP5 Conductivity Probe, Calibrating Buffer Kit, USB Cord, AC Adapter, and SmartLogger II Software, PLUS consumables

Prod. No.	Description
H270GNP	H270G meter only, USB Cord, AC Adapter, and SmartLogger II Software
H270GBNP	H270G meter only with Bluetooth, USB Cord, AC Adapter, and SmartLogger II Software

H280G Benchtop pH, mV, Temp, ORP, Conductivity, TDS, Salinity, DO, and ISE Meter

H280G has all the features of the H270G plus:

- *Dissolved Oxygen measurement with automatic barometric pressure compensation*
- *Two point user selectable DO Calibration*
- *Ability to use Winkler Calibration Values*

NEW!

Prod. No.	Description
H280G-BNDL	H280G meter with PH77-SS ISFET pH Probe, CDW97-KP5 Conductivity Probe DO50-GS Dissolved Oxygen Probe, USB Cord, AC Adapter, and SmartLogger II Software, PLUS consumables
H280GB-BNDL	H280G Bluetooth meter with PH77-SS ISFET pH Probe, CDW97-KP5 Conductivity Probe, DO50-GS Dissolved Oxygen, USB Cord, AC Adapter, SmartLogger II Software, PLUS consumables

Prod. No.	Description
H280GNP	H280G meter only, USB Cord, AC Adapter, and SmartLogger II Software
H280GBNP	H280G Bluetooth meter only, USB Cord, AC Adapter, and SmartLogger II Software

H-Series Waterproof Handheld Meters

The H-Series handheld meters are dual-technology pH (non-glass "ISFET" and traditional glass). These rugged meter systems showcase a large LCD display with LED backlight, and have the ability to accurately measure pH (ISFET or glass), mV, Temperature, ORP, and ISE.* These ultra-modern waterproof handheld meters are engineered to give years of reliable service in the most difficult of applications.

They also offer a waterproof enclosure with an IP67 rating. G-version models include the added features of Bluetooth wireless remote control and data transfer, GLP-related features such as date and time stamping, calibration recall, password-protected set up, ISE capability, data point storage and more.

H160G Waterproof Portable pH, mV, Temp, ORP, and ISE Meter

All handheld meters include:
• Dual Technology pH with either stainless steel, non-glass ISFET probes or traditional glass electrodes with BNC connector
• IP67 Waterproof, Chemical Resistant, Dust Resistant, Floating enclosure
• -2 to +19 pH range (Non "G-Series" meter has a range of 0-14 pH)
• 0.1 or 0.01 pH resolution
• Up to five point pH calibration
• Automatic or manual temperature compensation
• Stores 999 data points (Non "G-Series" meters have no installed memory)
• ISE capability (Non "G-Series" meters do not offer ISE capability)

NEW!

Bluetooth

Prod. No.	Description
H160-BNDL	H160 Meter & PHW77-SS pH Probe; Field Case & Calibration Kit; Rubber Holster, PLUS consumables
H160G-BNDL	H160G Bluetooth Meter, PHW77-SS ISFET Probe, Field Carrying Case & Calibration Kit, Rubber Holster, and Smartlogger II Software, PLUS consumables

Prod. No.	Description
H160NP	H160 Meter only
H160GNP	H160G Meter only with Bluetooth, data logging/transfer and ISE capabilities. Also includes Smartlogger II Software

H170G Waterproof Portable pH, mV, Temp, ORP Conductivity, TDS, Salinity and ISE Meter

H170G meter has all these additional features:
• Automatic conductivity cell constant recognition
• Five point conductivity calibration

NEW!

Prod. No.	Description
H170-BNDL	H170 Meter, PHW77-SS pH Probe & CDW97-KP5 Conductivity Probe; Field Case & Calibration/Standards Kit, and Rubber Holster, PLUS consumables
H170G-BNDL	H170G Bluetooth Meter, PHW77-SS pH Probe, CDW97-KP5 Conductivity, Field Case & Calibration/Standards Kit, Rubber Holster, and Smartlogger II Software, PLUS consumables

Prod. No.	Description
H170NP	H170 Meter only
H170GNP	H170G Meter only with Bluetooth, data logging/transfer and ISE capabilities. Also includes Smartlogger II Software

ISE, data logging/transfer available with G models

H-Series Probes

NEW!

Sensor type	Range	Slope	Temp. Range	Dimensions	Interferences	Prod. No.
General Purpose pH Probe with Round Tip						
pH	0-14 pH	+59 mV/pH unit at 25ºC	-5 to 105ºC Recommended use below 60ºC	8.3 mm x 140 mm		**PH77-SS** **PHW77-SS***
pH Micro Probe						
pH	0-14 pH	+59 mV/pH unit at 25ºC	-5 to 105ºC Recommended use below 60ºC	4.8 mm x 130 mm and 8.3 mm x 80 mm		**PH17-SS** **PHW17-SS***
pH Piercing Tip Micro Probe						
pH	0-14 pH	+59 mV/pH unit at 25ºC	-5 to 105ºC Recommended use below 60ºC	4.8 mm x 90 mm and 8.3 mm x 80 mm		**PH37-SS** **PHW37-SS***

Waterproof Version. Waterproof probes are for use with the H160, H160G, H170 and H170G handheld meters.

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Sensor type	Range	Slope	Temp. Range	Dimensions	Interferences	Prod. No.
pH NMR Tube Micro Probe						
pH	0-14 pH	+59 mV/pH unit at 25°C	-5 to 105°C Recommended use below 60°C	3.8 mm x 220 mm and 8.3 mm x 80 mm		**PH47-SS** **PHW47-SS***
pH Piercing Tip Micro Probe with Heavy Duty Handle						
pH	0-14 pH	+59 mV/pH unit at 25°C	-5 to 105°C Recommended use below 60°C	4.8mm x 90 cm + heavy duty handle		**PH57-SS** **PHW57-SS***
51935 pH Combination *(with temperature)*						
pH	0-14 pH	-59 mV/pH unit at 25°C	0 to 100°C Recommended use below 45°C	12.1 mm x 152.5 mm	Na$^+$ above pH12	**5193511**
51910 Platinum Series pH Combination *(with temperature)*						
pH	0-14 pH	-59 mV/pH unit at 25°C	0 to 100°C Recommended use below 45°C	12.7 mm x 241 mm	Na$^+$ above pH12	**5191011**
51940 Refillable pH Combination Electrode *(with temperature)*						
pH	0-14 pH	-59 mV/pH unit at 25°C	0 to 100°C Recommended use below 45°CC	12.1 mm x 152.5 mm	Na$^+$ above pH12	**5194011**
Standard ORP probe						
ORP	±1999mV		-5 to 105°C	12 mm x 110 mm		**ORP110-GS**
"Bull's-Eye" General Purpose Conductivity Probe						
Conductivity (Graphite)	0-100,000 µS Optimum range: 5 µS-1000 µS		-5 to 105°C	16mm x 110 mm		**CDW97-KP5**
Drinking Water Conductivity Probe						
Conductivity (Platinum)	0-120,000 µS Optimum range: 100 µS-2000 µS		-5 to 105°C	12mm x 110 mm		**CDW97-K10**
Salinity/Brackish Water Conductivity Probe						
Conductivity (Platinum)	0-200,000 µS Optimum range: 1 mS-200 mS		-5 to 105°C	12mm x 110 mm		**CDW97-K1**
Standard Galvanic Dissolved Oxygen Electrode						
Dissolved Oxygen	Dissolved Oxygen 0-19.99 mg/L % Saturation: 0- 199.9 %		0 to 50°C	12mm x 110 mm		**DO50-GS**

*Waterproof Version. Waterproof probes are for use with the H160, H160G, H170 and H170G handheld meters.

Hach's MP Meters offer single-handed operation for clean water applications, thanks to their probeless design.

NEW!

Go Probeless!

Hach's MP Meters work without probes, allowing rapid testing of pH, ORP (Oxidation Reduction Potential)/Redox, conductivity, resistivity, Total Dissolved Solids (TDS) and temperature. The instruments use integrated sample cups for efficient high throughput testing vs. external probes.

Simple, One-Handed Operation

MP Meters operate easily with just one hand. Whether in the lab, plant, or in a remote field location, measurement takes only two steps: 1. Fill the cell cup and 2. Push a parameter key to take the reading.

Infrequent Calibration

Achieve reliable readings without repetitious calibration. Typical calibration frequency ranges from every two weeks to monthly, depending on individual testing needs. To calibrate, simply press one button and adjust the instrument to the standard's value. With the exception of factory-set temperature, all parameters feature an internal electronic setting that can be used for field calibration and as a quick check on pH/ORP sensor life.

MP Meters Model Selection Guide

Parameters	MP-4	MP-6p	MP-6
pH		■	■
ORP		■	■
Conductivity	■	■	■
Resistivity	■		■
TDS	■	■	■
Mineral/Salt		■	
Temperature	■	■	■

Features			
Autoranging	■	■	■
Adjustable Temperature Compensation	■	■	■
Memory	100 readings	100 readings	100 readings
Date & Time Stamp	■	■	■
pH Calibration Prompts		■	■
Low battery indicator	■	■	■
Auto-off	■	■	■

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Specifications*

Power
9V alkaline battery

Battery Life
>100 hours (5000 readings)

Display
4-digit Liquid Crystal Display (LCD)

Ratings
IP67/NEMA 6; Waterproof to 1 meter/3 feet

Operating/Storage Temperature
0 to 55°C (32 to132°F)

Cell Capacity
pH/ORP: 1.2 mL (0.04 oz.)
Conductivity/TDS/Resistivity: 5 mL (0.2 oz)

Case/Conductivity Cell Material
VALOX®†

Dimensions
196 x 68 x 64 mm (7.7 x 2.7 x 2.5 in)

Weight
352 g (12.4 oz)

Conductivity
Range: 0–9999 µS/cm, 10–200 mS/cm in 5 autoranges
Resolution: 0.01(<100 µS), 0.1(<1000 µS), 1.0(<10 mS),
0.01(<100 mS), 0.1(<200 mS)
Accuracy: ±1% of reading
Auto Temperature Compensation: 0 to 71°C (32 to160°F)
Adjustable Temperature Compensation to 25ºC: 0–9.99%/°C
Conductivity/TDS Ratios Preprogrammed: KCl, 442‡, NaCl
Adjustable Conductivity/TDS Ratio Factor: 0.20–7.99

TDS
Range: 0–9999 ppm, 10–200 ppt in 5 autoranges
Resolution: 0.01(<100 ppm), 0.1(<1000 ppm), 1.0(<10 ppt),
0.01(<100 ppt), 0.1(<200 ppt)
Accuracy: ±1% of reading
Auto Temperature Compensation: 0 to 71°C (32 to 160°F)
Adjustable Temperature Compensation to 25ºC: 0–9.99%/°C
Conductivity/TDS Ratios Preprogrammed: KCl, 442‡, NaCl
Adjustable Conductivity/TDS Ratio Factor: 0.20–7.99

Mineral/Salt
Range: 0–9999 ppm, 10–200 ppt in 5 autoranges
Resolution: 0.01 (<100 ppm), 0.1 (<1000 ppm), 1.0 (<10 ppt),
0.01 (<100 ppt), 0.1 (<200 ppt)
Accuracy: ±1% of reading
Auto Temperature Compensation: 0 to 71°C (32 to 160°F)
Adjustable Temperature Compensation to 25ºC: 0–9.99%/°C
Conductivity/TDS Ratios Preprogrammed: KCl, 442‡, NaCl
Adjustable Conductivity/TDS Ratio Factor: 0.20–7.99

Resistivity
Range: 10 KΩ–30 MΩ
Resolution: 0.01(<100 KΩ), 0.1(<1000 KΩ), 0.1(>1 MΩ)
Accuracy: ±1% of reading
Auto Temperature Compensation: 0 to 71°C (32 to 160°F)
Adjustable Temperature Compensation to 25ºC: 0–9.99%/°C

pH
Range: 0–14 pH
Resolution: 0.01 pH
Accuracy: ±0.01 pH
Auto Temperature Compensation: 0 to 71°C (32 to 160°F)

ORP
Range: ±999 mV
Resolution: 1 mV
Accuracy: ±1 mV

Temperature
Range: 0 to 71°C (32 to 160°F)
Resolution: 0.1°C/F
Accuracy: ±0.1°C

*Subject to change without notice.

† VALOX is a trademark of SABIC Innovative Plastics IP BV
‡ 442 Natural Water Standard is a trademark of Myron L Company

Prod. No.	Description
ESSENTIALS PACKAGES	
HMP4EP	MP-4 Portable Meter, hard-sided case, and 50 mL NaCl, KCl, and 442 standard solutions for calibration
HMP4EPD	MP-4 Portable Meter, MP-Dock, hard-sided case, and 50 mL NaCl, KCl, and 442 standard solutions for calibration
HMP6PEP	MP-6p Portable Meter with pH storage solution, hard-sided case, 50 mL NaCl, KCl, and 442 standard solutions, and 50 mL pH buffer set for calibration.
HMP6PEPD	MP-6p Portable Meter with pH storage solution, MP-Dock, hard-sided case, 50 mL NaCl, KCl, and 442 standard solutions, and 50 mL pH buffer set for calibration.
HMP6EP	MP-6 Portable Meter with pH storage solution, hard-sided case, 50 mL NaCl, KCl, and 442 standard solutions, and 50 mL pH buffer set for calibration.
HMP6EPD	MP-6 Portable Meter with pH storage solution, MP-Dock, hard-sided case, 50 mL NaCl, KCl, and 442 standard solutions, and 50 mL pH buffer set for calibration.

Prod. No.	Description
METERS ONLY	
HMP4	MP-4 Portable Meter
HMP6P	MP-6p Portable Meter with pH storage solution
HMP6	MP-6 Portable Meter with pH storage solution
ACCESSORIES	
HMPDOCK	MP-Dock Accessory Package (includes MP DataLink software)
HMPCASE	Hard-sided case for MP Portable Meter, MP-Dock, and up to six 50 mL standard solutions
2975126	Acid electrode cleaning solution, 50 mL pour-top

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

See pages 44-47 for replacement probes.
See page 48 for sensION meter and probe accessories.

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
5177511	sensION4 Benchtop pH/ISE Meter with Platinum pH electrode 230V

See pages 44-47 for replacement probes.
See page 48 for sensION meter and probe accessories.

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

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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); 0-200% 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
5455011	sensION8 Benchtop Dissolved Oxygen Meter with electrode, 1-meter (40") cable, 230 V

See page 45 for replacement probes.
See page 48 for sensION meter and probe accessories.

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)*

• *Also measures Salinity and TDS*

• *Measures/compensates temperature in °C or °F*

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
5450011	sensION7 Benchtop Conductivity Meter with electrode, 1-meter (40") cable, 230 V

See page 45 for replacement probes.
See page 48 for sensION meter and probe accessories.

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

Sensor type	Range	Slope	Temp. Range	Dimensions	Interferences	Prod. No.	Description
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) Occasional Use: 0 to 100°C (32 to 212°F)	Diameter: 12.7 mm (0.50") Total Length: 241 mm (9.5")	Na⁺ above pH 12		**ELECTRODE ONLY** **5191000** pH Platinum Series Combination Electrode (use with sensION Meters) Features 5-pin connector. Includes two electrolyte cartridges and a manual. **5191022** With BNC and DIN connectors. **5191011** With BNC and 3.5 mm phone connectors **ELECTRODE ACCESSORIES** **2546902** Potassium Chloride Electrolyte Cartridge, pk/2 **2657364** pH Storage Solution Powder Pillows, pk/20 **2756549** pH Electrode Storage Solution, 500 mL **2299264** Buffer Powder Pillows, pH 4.0 and 7.0, pk/20 **5189900** Low Ionic Strength Chamber **5192900** Soaker Bottle
51915 Platinum Series pH Combination Flat-End							
Glass Membrane	pH: 0 to 13	58 (±3) mV/decade	Continuous Use: 0 to 45°C (32 to 113°F) Occasional Use: 0 to 80°C (32 to 176°F)	Diameter: 12.7 mm (0.50") Total Length: 229 mm (9.0")	Na⁺ above pH 12		**ELECTRODE ONLY** **5191500** pH Platinum Series Combination Flat End Electrode (use with ALL Hach meters) Features BNC connector. Includes two electrolyte cartridges and a manual **ELECTRODE ACCESSORIES** **2546902** Potassium Chloride Electrolyte Cartridge, pk/2 **2657364** pH Storage Solution Powder Pillows, pk/20 **2756549** pH Electrode Storage Solution, 500 mL **5189900** Low Ionic Strength Chamber **5192900** Soaker Bottle
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) Occasional Use: 0 to 100°C (32 to 212°F)	Diameter: 12.1 mm (0.475") Total Length: 152.5 mm (6")	Na⁺ above pH 12		**ELECTRODE ONLY** **5193500** pH Gel-Filled Combination Electrode (use with sensION Meters) Features 5-pin connector. Includes a manual. **5193522** With BNC and DIN connectors. **5193511** With BNC and 3.5 mm phone connectors. **ELECTRODE ACCESSORIES** **2657364** pH Storage Solution Powder Pillows, pk/20 **2756549** pH Electrode Storage Solution, 500 mL **5192900** Soaker Bottle

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Sensor type	Range	Slope	Temp. Range	Dimensions	Interferences	Prod. No.	Description
51940 Refillable pH Combination Electrode *(with temperature)*							
Glass Membrane	pH: 0 to14	58 (±3) mV/decade at 25°C	Continuous Use: 0 to 45°C (32 to 113°F) Occasional Use: 0 to 100°C (32 to 212°F)	Diameter: 12.1 mm (0.475") Total Length: 152.5 mm (6")	Na+ above pH 12		ELECTRODE ONLY
						5194000	Refillable Combination Electrode (use with sensION Meters) Features 5-pin connector. Includes a manual.
						5194022	With BNC and DIN connectors.
						5194011	With BNC and 3.5 mm phone connectors.
							ELECTRODE ACCESSORIES
						5194100	Filling Solution, 65 mL
						2657364	pH Storage Solution Powder Pillows, pk/20
						2756549	pH Electrode Storage Solution, 500 mL
						5192900	Soaker Bottle
51975 Conductivity Probe							
Graphite 4-Pole	0.1 µS-200 mS 0.45 (cm-1) cell constant	N/A	-10 to 110°C	120 x 15 mm (4.8 x 0.6")	N/A		PROBE ONLY
						5197500	Conductivity Probe with 5-Pin circular connector. (1 m Cable)
						5197503	Conductivity Probe with 5-Pin circular connector. (3 m Cable)
							ELECTRODE ACCESSORIES
						2307542	180 µS/cm, 85.47 mg/L TDS, 100 mL
						1440042	1,000 µS/cm, 491 mg/L TDS, 100 mL
						210542	1,990 µS/cm, 1,000 mg/L TDS, 100 mL
						2307442	18,000 µS/cm, 10,246 mg/L TDS, 100 mL
						2714349	53,000 µS/cm, 35.0 ppt salinity, 500 mL
51970 Dissolved Oxygen Probe							
Clark-Type Polarographic	0 to 20 mg/L or 0 to 200% saturation	N/A	0 to 50°C	149 x 12.1 mm (6 x 0.475"}	N/A		PROBE ONLY
						5197000	Dissolved Oxygen Probe with 5-Pin circular connector. (1 m Cable)
						5197003	Dissolved Oxygen Probe with 5-Pin circular connector. (3 m Cable)
						5197015	Dissolved Oxygen Probe with 5-Pin circular connector. (15 m Cable)
							ELECTRODE ACCESSORIES
						5197100	BOD Accessories Kit, with funnel and spacer for D.O. Probe Model 51970-00
						5196800	D.O. Probe Service Kit, with two membranes, electrolyte filling solution and cloth
						5197300	Membranes for D.O. Probe, pk/2
						2759126	Electrolyte Filling Solution, 50 mL
51980 Temperature Probe							
Thermistor	N/A	N/A	0 to 80°C	120 x 6 mm (4.8 x 0.25")	N/A		PROBE ONLY
						5198000	Temperature Probe (sensION Meter) with 5-pin connector.
						5198022	Temperature Probe (EC Meter) with DIN Connector
						5198011	Temperature Probe (Hach One Meter) with 3.5 mm phone connector

Sensor type	Range	Slope	Temp. Range	Dimensions	Interferences	Prod. No.	Description
51928 Fluoride Combination							
Crystal Membrane	0.02 mg/L to saturated (1 x 10-6 M to saturated) range: 5 to 9	-58 (±3) mV/decade	0 to 80°C	110 x 12 mm (4.4 x 0.5")	OH–		**ELECTRODE ONLY**
						5192800	Fluoride Combination Electrode with electrolyte gel cartridges and manual. With BNC connector.
							ANALYSIS PACKAGE
						5192810	Fluoride Analysis Package –Combination (Includes electrode and following items, also available separately)
						2546902	Potassium Chloride Reference Cartridge, pk/2
						29149	Fluoride Standard Solution, 1.0 mg/L, 500 mL
						35949	Fluoride Standard Solution, 10 mg/L 500 mL
						258999	Fluoride ISA Powder Pillows, pk/100
						108041	Beaker, 50 mL
51920 Nitrate Combination							
PVC Membrane	0.5 mg/L (3.5 x 10^{-6} N) to 14,000 mg/L (1 N) NO_3^--N as N Sample pH range: 3 to 11	-58 (±3) mV/decade in the linear range (>4 mg/L NO_3^--N)	10 to 30°C	244 x 12.7 mm (9.6 x 0.5")	ClO_4^-, I^-, Br^-, NO_2^-, Cl^-, HCO_3^-, CO_3^{2-}		**ELECTRODE ONLY**
						5192000	Nitrate Platinum Series Combination Electrode with two electrolyte cartridges, six nitrate membrane modules, fill solution and a manual. With BNC connector.
							ANALYSIS PACKAGE
						2348800	Nitrate Analysis Package -Combination (Includes electrode and following items, also available separately)
						2597102	Ammonium Sulfate Reference Cartridges, pk/2
						4456926	Nitrate Internal Filling Solution, 50 mL
						4613300	Replacement Membrane Module, pk/6
						30749	Nitrate Nitrogen Standard, 10 mg/L, 500 mL
						194749	Nitrate Nitrogen Standard, 100 mg/L, 500 mL
						4456369	Nitrate ISA Powder Pillows, pk/100
						108041	Beaker, 50 mL
						5192088	Manual
51937 ORP							
Platinum Wire	mV range of meter used	N/A	Continuous Use: 0 to 45°C (32 to 113°F) Occasional Use: 0 to 100°C (32 to 212°F)	Diameter: 12.7 mm (0.50") Total Length: 241 mm (9.5")	N/A		**ELECTRODE ONLY**
						5193700	ORP Combination Electrode with electrolyte gel cartridges and a manual. With 5-pin connector.
							ANALYSIS PACKAGE NOT AVAILABLE

HACH®
Be Right™

800-227-4224
Outside the United States, call 970-669-3050

Sensor type	Range	Slope	Temp. Range	Dimensions	Interferences	Prod. No.	Description
51939 ORP							
Platinum Wire	mV range of meter used	N/A	Continuous Use: 0 to 45°C (32 to 113°F) Occasional Use: 0 to 100°C (32 to 212°F)	Diameter: 12.7 mm (0.50"} Total Length: 241 mm (9.5")	N/A	**5193900**	ELECTRODE ONLY ORP Gel-filled Combination Electrode with ready-to-use filling solution and a manual. With 5-pin connector. ANALYSIS PACKAGE NOT AVAILABLE
51925 Sodium Combination							
Glass Membrane	0.010 mg/L Na^+ to saturated solution	+58 (±3) mV/decade in the linear range (>2 mg/L Na)	Continuous use: 0 to 50°C; Intermittent use: 0 to 80°C	240 mm x 12 mm (9.4 x 0.5"}	Ag^+, H^+, K^+, NH_4^+	**5192500** **2348100** **2595802** **2318153** **1474949** **4451569** **18201H** **108041** **5192588**	ELECTRODE ONLY Sodium Platinum Series Combination Electrode with two electrolyte cartridges and a manual. With BNC connector. ANALYSIS PACKAGE Sodium Analysis Package -Combination (Includes electrode and following items, also available separately) Ammonium Chloride Reference Cartridge (pk/2) Sodium Standard, 100 mg/L, 1000 mL Sodium Standard, 1000 mg/L, 500 mL Sodium ISA Powder Pillows, pk/100 Sodium Chloride, ACS, 454 g Beaker, 50 mL Manual
51927 Ammonia Combination							
Gas sensing	0.06 to 17,000 mg/L as NH_3 0.05 to 14,000 mg/L as NH3-N pH range: > 11	-58 (±3) mV/decade	0 to 50°C	149 x 12 mm (6 0.5")	Volatile Amines	**5192700** **5025300** **2348700** **4447226** **5192711** **15349** **2406549** **4447169** **2541259** **108041**	ELECTRODE ONLY Ammonia Combination Electrode with three ammonia membrane modules, electrode filling solution, and a manual. With BNC connector. Air Gap Assembly recommended. Sold separately. ANALYSIS PACKAGE Ammonia Analysis Package -Combination (Includes electrode and following items, also available separately) Electrode Filling Solution, 50 mL Replacement Membranes, pk/5 Ammonia Nitrogen Standard, 10 mg/L, 500 mL Ammonia Nitrogen Standard, 100 mg/L, 500 mL Ammonia ISA Powder Pillows, pk/100 Electrode Storage Solution, 50 mL Beaker, 50 mL

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

Electrode Washer
Product No. 2704700

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

Docking Station
Product No. 51875XX

Probe Holder
Product No. 5467100

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

Prod. No.	Description
5197100	BOD Accessory Kit for 5197000 Dissolved Oxygen Probe (clark cell)
5189900	LIS Sample Chamber
2089400	Electrode Rack
2615700	Electrode Holder, Flexible Arm
4531500	Extra Stir Bar, Polygon, Teflon-coated, 2.22 x 0.48 cm
2704700	Electrode Washer
5187501	Docking Stations 115V
5187502	Docking Stations 230V
4812900	Computer Serial Cable, for SensION meters

Prod. No.	Description
5467100	Probe Holder
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

Pocket-sized pH testers for quick, easy, accurate measurements.

Applications

- *Plating*
- *Water conditioning*
- *Boiler/cooling water*
- *Lakes and rivers*
- *Food processing*
- *Swimming pools and spas*
- *Anywhere humidity levels are high*

Now IP67 rated* (dustproof and waterproof), Pocket Pal Testers are immune to harsh environments and accidental spills that could harm electronics. If accidentally immersed in water, the circuitry will remain unharmed. Pocket Pal Testers clip onto your shirt pocket, produce immediate results, and feature an easy-to-read liquid crystal display (LCD). While not recommended as a replacement for a pH or ORP instrument/electrode system, or a Hach Conductivity or TDS meter, Pocket Pal Testers offer a cost-effective alternative for routine, on-the-spot measurements.

Temperature Pocket Pal Tester

Range: -15 to 170°C
The Temperature Pocket Pal Tester is an accurate, economical tester offering a wide range of measurement otherwise requiring two glass thermometers.

pH Pocket Pal Tester

Range: 0.0-14.0 pH   Resolution: 0.1 pH   Accuracy: ±0.2 pH
The pH Pocket Pal Tester is ideal for quick, on-site pH testing. Applications include water quality testing at cooling towers, swimming pools and spas**. Hach color-coded, unit-dose pH buffer powder pillows, which ensure freshness and eliminate the possibility of contamination, and prepared pH buffer solutions are available in three pH values, 4.01, 7.00, or 10.00 (see pages 52-53). They are recommended for calibration adjustments.

TDS Pocket Pal Tester

Range: 10-1990 TDS
IP67 rated (waterproof and dustproof). Ideal for quick TDS spot checks, this tester is not a replacement for a conductivity or TDS meter. Tester accuracy is ±2% at 25°C and accuracy can be ±10% of reading over the temperature measurement range. **(For more accurate measurement, use the HQ14d, HQ30d, or HQ40d Meters, see pages 24-26.)** Results are displayed digitally. Prepared sodium chloride solution is available and is required for calibration.

Conductivity Pocket Pal Tester

Range: 10-1990 µS/cm

The Conductivity Pocket Pal Tester is ideal for swimming pools and drinking water control. Now IP67 rated. Rugged, dustproof and waterproof plastic body, and easy-to-read digital display make it perfect for on-site measurement. Other applications include water treatment (softener, demineralization, reverse osmosis, and drinking water), fish farming and aquariums, and pollution control. Prepared sodium chloride solution is available and is required for calibration.

ORP Pocket Pal Tester

Range: ±999 mV
The ORP Pocket Pal Tester offers an accurate and affordable way of testing for redox potential. Because there are no chemical test kits or litmus paper for measuring this parameter, the ORP Pocket Pal Tester is a valuable tool, assuring accuracy, fast response, and excellent repeatability. The ORP Pocket Pal Tester is not IP67 rated. Lights solution is available to check electrode potential.

*Only the Temperature, pH, TDS, and Conductivity Pocket Pal Testers are IP67 rated.

**Testing in the presence of heavy metals or in liquids warmer than 50°C is not advised.

Prod. No.	Description
4435001	pH Pocket Pal Tester
4440001	TDS Pocket Pal Tester
2686601	Conductivity Pocket Pal Tester
2727300	ORP Pocket Pal Tester
4445001	Temperature Pocket Pal Tester
4445010	Replacement Temperature Probe
2367800	Replacement batteries, 4/pk

NOTE: Calibration solutions are not included with Pocket Pal testers.

H-Series miniLab H120, H125, and H128 Pocket pH Meters

The model H128 miniLab allows for up to a 3-point calibration, with simultaneous display of temperature.

Waterproof, pocket-sized pH meters with non-glass sensors.

• Silicon chip non-glass pH sensor

• Stores dry with minimal maintenance

• 1-Point calibration on Model H120
  (Suggested range: 5.0 to 9.0 pH)

• 1, 2, or 3-point cal on Models H125 and H128

• Automatic temperature compensation (ATC)

• Fast response time

• Over 200-hour life

• Replaceable reference electrode

Choose the best pocket pH meter for your application

Model	1 point calibration	1, 2 or 3 point calibration	Temperature display	0.01 pH Resolution
H120	■		■	
H125		■	■	
H128		■	■	■

Prod. No.	Description
H120	H120 miniLab pH Meter
H125	H125 miniLab pH Meter
H128	H128 miniLab pH Meter
2889800	H125 and H128 Calibration Buffer Set
2889900	H120 Calibration Buffer Set
RF01-01	H120-125-128 Reference Electrode Module

IQ150 Portable pH Meter

Portable pH meter with non-glass electrode.

• Meter accepts both stainless steel probes with silicon chip sensors as well as any traditional glass sensor pH electrode with BNC connector

• Probe stores dry and needs no maintenance.

• Non-glass probe can be used in liquids, viscous samples, and semi-solids

• Automatic or manual temperature compensation

• One or two point calibration

Prod. No.	Description
2814700	pH meter with stainless steel probe, silicon chip pH electrode, buffers, and a carrying case

OPTIONAL PROBES

Prod. No.	Description
2814800	Replacement stainless steel pH probe with silicon chip sensor
8506700	Micro pH Probe w/Piercing Tip: Great for measuring pH in light piercing applications—in cheese, dough, or fish
8506800	Heavy-duty Piercing Tip pH Probe: Used in meat industries. Heavy Duty handle simplifies tough piercing applications.
8506900	Standard Micro pH Probe: Small diameter probe body enables pH measurement in test tubes, flasks, or anywhere small sample sizes must be measured

The rugged pH system for use in the lab, field, or right on the production line. The stainless steel probe stores dry and requires no maintenance. Non-glass probe is excellent for applications where glass electrode breakage is a problem. Slanted tip is suitable for liquids, semi-solids, and even piercing applications. Silicon chip sensor cleans easily with a toothbrush and detergent.

NEW!

Ensure the dissolved lead and copper concentration levels in your drinking water distribution system meet EPA standards with the SA1100 Scanning Analyzer.

The portable SA1100 is an easy-to-use, accurate, cost-effective instrument for monitoring lead and copper concentrations. Using differential pulse anodic stripping voltammetry, a USEPA-approved methodology for determining total lead in drinking water that can also determine total copper*, the SA1100 makes monitoring easy.

Differential pulse anodic stripping voltammetry is approved by the USEPA only for determining lead concentrations, and acid digestion is required for reporting purposes. Hach Method 1001, Determination of Lead, for use in Lead and Copper Rule compliance monitoring.

EPA COMPLIANT

SA1100

Parameter	Lead	Copper
Calibration	Pre-calibrated electrodes (HSE-Pb)	Pre-calibrated electrodes (HSE-Cu)
Analysis Time	3 minutes	3 minutes
Range	2-100 µg/L	50-2000 µg/L
Detection Limit	2 µg/L	50 µg/L
Resolution	1 µg/L	1 µg/L
Operating Temperature	15-30°C	15-30°C

Prod. No.	Description
5050000	SA1100 Analyzer for Lead Includes instrument, carrying case, instructions, sensor pack electrodes (Prod. No. 5050100), calibration chip and check standard.
5060000	SA1100 Analyzer for Copper Includes instrument, carrying case, instructions, sensor pack electrodes (Prod. No. 5050200), calibration chip and check standard.

REPLACEMENT CONSUMABLES

5050100	Sensor Pack Electrodes for Lead (10 Tests) Includes electrodes (10), sample preparation tablets (10), graduated tubes (10), crushing rods and calibration chip.
5050200	Sensor Pack Electrodes for Copper (10 Tests Includes electrodes (10), sample preparation tablets (10), graduated tubes (10), crushing rods and calibration chip.

Specifications*

Internal Memory
Stores up to 500 readings

Display
Backlit, graphical LCD, with six language options

Output Interface
Waterproof USB connection to PC

Power
Uses four AA 1.5v batteries, auto switch-off

Size
Instrument only, 170 x 126 x 116 mm

Subject to change without notice.

pH 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. 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 ∆NR 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		
6.00	50	**1405566**
6.86	15	**1409895**
8.00	15	**1407995**
9.00	50	**1410766**
pH Storage Solution Pillows	20	**2657364**

pH Buffer Solutions

pH is ±0.02 at 25ºC.

Item	Unit	Prod. No.
pH 4.01 Color-Coded Red (NIST)		
	15 mL	**2283436** *NEW*
	50 mL	**2283426** *NEW*
	500 mL	**2283449**
	4 L	**2283456**
	20 L	**2283461**
pH 7.00 Color-Coded Yellow (NIST)		
	15 mL	**2283536** *NEW*
	50 mL	**2283526** *NEW*
	500 mL	**2283549**
	4 L	**2283556**
	20 L	**2283561**
pH 10.01 Color-Coded Blue (NIST)		
	15 mL	**2283636** *NEW*
	50 mL	**2283626** *NEW*
	500 mL	**2283649**
	4 L	**2283656**
	20 L	**2283661**
pH 4.01 Colorless (NIST)		
	15 mL	**1222336**
	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**

Save when you purchase pH buffer 3-packs!

Prod. No.	Description
20 L SIZE 3-PACK	
2507300	Includes:
	2283661 10.01 (blue) NIST
	2283561 7.00 (yellow) NIST
	2283461 4.01 (red) NIST
	No headspace = longer shelf life.
500 mL SIZE 3-PACK	
2947600	Includes:
	2283649 10.01 (blue) NIST
	2283549 7.00 (yellow) NIST
	2283449 4.01 (red) NIST
4 L SIZE 3-PACK	
2507200	Includes:
	2283656 10.01 (blue) NIST
	2283556 7.00 (yellow) NIST
	2283456 4.01 (red) NIST

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**

Prod. No.	Description

pH STORAGE AND CLEANING SOLUTIONS

2756559	pH Storage Solution (3M Potassium Chloride), 50 mL
2756549	pH Storage Solution (3M Potassium Chloride), 500 mL
2965249	*NEW* Electrode Cleaning Solution
2964349	*NEW* ISFET Probe Cleaning Solution for proteins
2756526	*NEW* pH electrode storage solution, 50 mL pour-top
2964449	*NEW* pH electrode rinse solution, non-ionic surfactant, 500 mL
2975126	*NEW* Acid Electrode Cleaning Solution, 50 mL
2975149	*NEW* Acid Electrode Cleaning Solution, 500 mL

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 50 mL

KCL CONDUCTIVITY STANDARDS

50 mL

2974226	*NEW* 74.55 mg/L (0.001M) KCl (146.9 µS/cm), 50 mL pour-top
2974326	*NEW* 745.5 mg/L (0.01M) KCl (1412 µS/cm), 50 mL pour-top
2974426	*NEW* 7455 mg/L (0.1M) KCl (12,890 µS/cm), 50 mL pour-top

500 mL

2974249	*NEW* 74.55 mg/L (0.001M) KCl (146.9 µS/cm), 500 mL
2974349	*NEW* 745.5 mg/L (0.01M) KCl (1412 µS/cm), 500 mL
2974449	*NEW* 7455 mg/L (0.1M) KCl (12,890 µS/cm), 500 mL

NACL CONDUCTIVITY STANDARDS

50 mL

2971826	*NEW* 49 mg/L NaCl (100 µS/cm), 50 mL pour-top
1440026	*NEW* 491 mg/L NaCl (1000 µS/cm), 50 mL pour-top
2972226	*NEW* 5370 mg/L NaCl (10,000 µS/cm), 50 mL pour-top
2307426	*NEW* 10,246 mg/L NaCl (18,000 µS/cm), 50 mL pour-top

100 mL

2971842	49 mg/L NaCl, (100 µS/cm), 100 mL
2307542	85.47 mg/L NaCl, (180 µS/cm), 100 mL
1440042	491 mg/L NaCl, (1000 µS/cm), 100 mL
2972242	5366 mg/L NaCl, (10,000 µS/cm), 100 mL
2307442	10,246 mg/L NaCl, (18,000 µS/cm), 100 mL
2714342	35 g/L KCl, (53 mS/cm), 100 mL

500 mL

2971849	49 mg/L NaCl, (100 µS/cm), 500 mL
1440049	491 mg/L NaCl, (1000 µS/cm), 500 mL
2972249	5366 mg/L NaCl, (10,000 µS/cm), 500 mL
2714349	35 g/L KCl, (53 mS/cm), 500 mL

NATURAL WATER CONDUCTIVITY SOLUTIONS

50 mL

2974526	*NEW* 442-30 Natural Water Standard Solution, 30 ppm TDS (46.7 µS/cm), 50 mL pour-top
2974626	*NEW* 442-300 Natural Water Standard Solution, 300 ppm TDS (445 µS/cm), 50 mL pour-top
2974726	*NEW* 442-1000 Natural Water Standard Solution, 1000 ppm TDS (1417 µS/cm), 50 mL pour-top
2974826	*NEW* 442-3000 Natural Water Standard Solution, 3000 ppm TDS (3960 µS/cm), 50 mL pour-top

500 mL

2974549	*NEW* 442-30 Natural Water Standard Solution, 30 ppm TDS (46.7 µS/cm), 500 mL
2974649	*NEW* 442-300 Natural Water Standard Solution, 300 ppm TDS (445 µS/cm), 500 mL
2974749	*NEW* 442-1000 Natural Water Standard Solution, 1000 ppm TDS (1417 µS/cm), 500 mL
2974849	*NEW* 442-3000 Natural Water Standard Solution, 3000 ppm TDS (3960 µS/cm), 500 mL

Prod. No.	Description

ORP STANDARDS AND SOLUTIONS

2316949	*NEW* ZoBell's Standard Solution, 500 mL
2612520	Light's Standard Solution in sealed ampules, 20/pk
2965349	*NEW* Reducing Solution for ORP Electrodes For use with reducing (negative mV) sample matrices

IONIC STRENGTH ADJUSTORS

258901	Fluoride Powder, 454 g
258999	Fluoride Powder Pillows, 100
2829017	Fluoride Solution, 3.78 L
4447169	Ammonia ISA Powder Pillows
4456369	Nitrate ISA Powder Pillows
4451569	Sodium ISA Powder Pillows

ELECTRODE FILLING SOLUTIONS AND CARTRIDGES

2546902	KCl Reference Electrolyte Gel, cartridges, 2/pk
2965026	*NEW* PHC281 filling solution, 2.44 M viscous KCl
2965126	*NEW* ISENA381 filling solution, 0.02 M NH4Cl
2841700	MTC301 and PHC301 filling solution, 3.0 M KCl w/sat Ag/Cl
2597102	Ammonium Sulfate Reference Cartridges, 2/pk
4456926	Nitrate internal filling solution, 50 mL

CALCIUM STANDARD SOLUTIONS

4457649	100 mg/L, 500 mL
2240349	1000 mg/L, 500 mL

CHLORIDE STANDARD SOLUTIONS

2370853	100 mg/L, 1 L
18349	1000 mg/L, 500 mL

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 NH$_3$-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
2109110	160 mg/L, 10-mL Voluette Ampule, 16

NITROGEN-NITRATE STANDARD SOLUTIONS AS NO$_3^-$-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
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

POTASSIUM STANDARD SOLUTIONS

2351749	100 mg/L, 500 mL

SODIUM ELECTRODE STORAGE SOLUTION

4451659	50 mL

SODIUM STANDARD SOLUTION AS Na

2835153	10 mg/L, 1 L (NIST)
2318153	100 mg/L, 1 L (NIST)
1474949	1000 mg/L, 500 mL (NIST)

Radiometer Analytical certified pH and conductivity standards give you:

- *Total control of the traceability chain and calculated uncertainties*
- *Direct traceability to primary standards and the reference method*
- *The competence and integrity of a laboratory internationally recognized to be accredited for the measurement of pH and conductivity reference materials*

Accredited calibration laboratory

The use of standards manufactured by an accredited laboratory gives you complete confidence in the traceability chain and calculated uncertainties. Radiometer Analytical is part of the Hach Lange group and their Calibration Laboratory, located in Berlin, is accredited for the calibration of certified pH and conductivity standards by DKD, the German national accreditation authority. This accreditation (No. DKD-K-47901) is recognized in more than 35 countries. All standards are formulated in compliance with NIST, IUPAC and DIN19266 specifications[1].

IUPAC Series Certified pH Standards

IUPAC Series certified pH standards are fully traceable to the Standard Hydrogen Electrode through Certified Reference Material produced by the Primary Laboratory of either NIST or DFM[2].

Radiometer Analytical Certified Conductivity Standards

Radiometer Analytical certified conductivity standards are fully traceable to SI units via Certified Reference Materials manufactured by NIST. They are prepared and calibrated according to the internationally recognized demal scale laid down by the International Organisation of Legal Metrology (OIML – Recommendation No. 56).

[1] *Except pH7.000 formulated by us according to NIST, IUPAC and DIN19266 specifications of pH6.865 and pH7.413.*

[2] *Dansk Fundamental Metrologi A/S is accredited for pH measurements by the Danish Accreditation and Metrology Fund (DANAK)(no. 255).*

R Radiometer
analytical

A Hach Company Brand

Type	Value*	Qty	Product No.
IUPAC Series Certified pH Standards			
pH1.679	pH 1.679 ±0.010 at 25°C	500 mL	**S11M001**
pH4.005	pH 4.005 ±0.010 at 25°C	500 mL	**S11M002**
pH6.865	pH 6.865 ±0.010 at 25°C	500 mL	**S11M003**
pH7.000	pH 7.000 ±0.010 at 25°C	500 mL	**S11M004**
pH7.413	pH 7.413 ±0.010 at 25°C	500 mL	**S11M005**
pH9.180	pH 9.180 ±0.010 at 25°C	500 mL	**S11M006**
pH10.012	pH 10.012 ±0.010 at 25°C	500 mL	**S11M007**
pH12.45	pH 12.45 ±0.05 at 25°C	500 mL	**S11M008**
Certified Conductivity Standards			
KCl 1 D	111.3 mS/cm ±0.5% at 25°C	500 mL	**S51M001**
KCl 0.1D	12.85 mS/cm ±0.35% at 25°C	500 mL	**S51M002**
KCl 0.01D	1408 µS/cm ±0.5% at 25°C	500 mL	**S51M003**
NaCl 0.05%	1015 µS/cm ±0.5% at 25°C	500 mL	**S51M004**
NaCl 25**	25.0 µS/cm ±5% at 25°C	250 mL	**S51M013**

* Tolerance.

Each standard is delivered in an airtight can and is supplied with a film-wrapped Certificate of Conformity and Traceability as well as a DKD Calibration Certificate specifying the exact measured value and calculated expanded uncertainty (k=2) for each batch of pH and conductivity solution.