

Beckman Coulter Φ ® Series pH and Electrochemistry Meters

Revolutionizing Electrochemistry. Again.



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From the company that invented the pH meter, Beckman Coulter is pleased to introduce the all-new Φ 400 and 500 Series pH and electrochemistry meters. *One look and you can see how Beckman Coulter is revolutionizing electrochemistry. Again.*

Bluetooth Technology – allows wireless data transfer from your Beckman Coulter meter to a PC from up to 10 meters (30 feet) away. Even more, you can control and configure your meter wirelessly. (Standard on all Φ 400 Series, Φ 550, 560 and 570).



GLP/GMP/21CFR Part 11 – meter can be used within GLP/ GMP environments, and can also interface with your LIMS system for 21 CFR Part 11 compliance – all included, with no additional software to buy.

Easy Operation – A full numeric keypad allows for easy data entry and recall from the 999 data and logging storage points while offering simplified control of the meter functions.

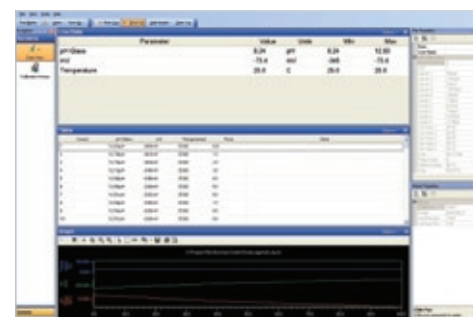
Ergonomic Design – silicone top cover with “thumb grips” allows for a comfortable feel while also providing easy clean-up of any inadvertant spill.

Powerful Software - every meter comes with powerful, easy to use software to connect your meter to a personal computer. The software allows for data recall & output in popular computer formats, and even configuration and control of your meter through the PC.

Advanced waterproofing – all handheld meters are IP67 rated and are “waterproof in use”. Waterproof connectors allow for no water incursion into the meter – even when used with non-waterproof electrodes. The meter even floats if dropped into water.



Visibility – the bright blue backlight contrasts nicely with the black large-segment LCD numbers, making for a big, easy-to-read display in any lighting environment.



Handheld Meters

Φ 400 Series



Meter kit includes carrying case, electrodes/probes, and necessary solutions (model appropriate).
Φ 470 kit shown

Available shockproof
holster fits all Φ 400
handheld meters

Rugged waterproof advanced technology matched with superior performance – Beckman Coulter Φ 400 Series
Handheld meters excel in every application from the lab or factory to the field.

- Bluetooth connectivity on all models
- GLP/GMP features, self-diagnostics, programmable datalogging interval and storage/recall of up to 999 data points
- Meters are IP67 rated and feature a waterproof BNC connector for pH and ISE, and waterproof locking connectors for dissolved oxygen and conductivity probes (model appropriate); unique design even floats in water!
- Automatic or manual temperature compensation; up to five point calibration (mode dependent)
- Automatic barometric pressure compensation (DO models only)
- Includes Smartlogger II computer software and interface instructions for communication to Labview or other LIMS software package for 21 CFR Part 11 compliance.

Handheld meters use 4 AA batteries (included) for up to 200 hours continuous operation. AC adapter optional. All meters include a 3 year Beckman Coulter replacement warranty

Mode	Range	Accuracy	Φ 410	Φ 420	Φ 430	Φ 450	Φ 460	Φ 470
pH	-2.00 to 19.99	± 0.01 pH	✓			✓	✓	✓
mV	-1999 mV to 1999 mV	± 1 mV	✓			✓	✓	✓
ISE	0.0 ppm to 1999 ppt	± 1.5%				✓		✓
Dissolved Oxygen	0.00-19.99 mg/L	± 1.5%		✓				✓
Barometric Pressure	225 to 900 mm Hg	± 1.2 mm Hg		✓				✓
Conductivity	0.00-199.9 mS	± 1%			✓		✓	✓
Salinity	0.00 – 42.0 ppt NaCl	± 0.1 ppt			✓		✓	✓
TDS	0.00 – 200,000 ppt	± 1%			✓		✓	✓
ORP	-1999 mV to 1999 mV	± 1 mV	✓			✓	✓	✓
Temperature	-5.0 to 105°C (20 to 199.9°F)	± 0.5°C	✓	✓	✓	✓	✓	✓
Bluetooth	10 meters (30 feet)	–	✓	✓	✓	✓	✓	✓

Meter kits include (as appropriate) Beckman Coulter 3-in-1 gel-filled pH electrode, dissolved oxygen probe, and/or conductivity probe; carrying case and necessary solutions.

Hardware Descriptions

Φ 410 pH/mV Meter Only	A58734
Φ 410 pH/mV Meter Kit	A58735
Φ 420 Dissolved Oxygen Meter Only	A58736
Φ 420 Dissolved Oxygen Meter Kit	A58737
Φ 430 Conductivity/TDS/Salinity Meter Only	A58738
Φ 430 Conductivity/TDS/Salinity Meter Kit	A58739
Φ 450 pH/mV + ISE Meter Only	A58740
Φ 450 pH/mV + ISE Meter Kit	A58741
Φ 460 pH/mV + Conductivity/TDS/Salinity Meter Only	A58742
Φ 460 pH/mV + Conductivity/TDS/Salinity Meter Kit	A58743
Φ 470 pH/mV + ISE + DO + Conductivity/TDS/Salinity Meter Only	A58744
Φ 470 pH/mV + ISE + DO + Conductivity/TDS/Salinity Meter Kit	A58745

Part Number

Accessories

AC Adapter, 120V, 60Hz, US Plug	A58827
AC Adapter, 230V, 50Hz, Euro Plug	A61782
Probe Stand	A58758
Magnetic Stirrer with digital RPM display, 120V, 60Hz, US Plug	A58759
Shockproof holster for Φ 400 Series	A60218

Benchtop Meters

Φ 500 Series



Meter kit includes electrodes/probes, temperature probe, and necessary solutions (model appropriate).
Φ 570 kit shown

Advanced technology matched with superior performance – Beckman Coulter Φ 500 Series Benchtop meters excel in every laboratory application.

- USB connectivity in all benchtop models, and additional Bluetooth connectivity on multiparameter models (Φ 550, 560, 570)
- GLP/GMP features, self-diagnostics, programmable datalogging interval and storage/recall of up to 999 data points
- Meters feature a BNC connector for pH and ISE, and locking connectors for dissolved oxygen and conductivity probes (model appropriate); silicone top case construction protects against spills
- Automatic or manual temperature compensation, automatic barometric pressure compensation (DO models only); up to five point calibration (mode dependent)
- Includes SmartLogger II computer software and interface instructions for communication to Labview or other LIMS software package for 21 CFR Part 11 compliance

Benchtop meters include an AC adapter as well as 4AA batteries for up to 200 hours continuous operation. All meters include a 3 year Beckman Coulter replacement warranty

Mode	Range	Accuracy	Φ 510	Φ 520	Φ 530	Φ 550	Φ 560	Φ 570
pH	-2.00 to 19.99	± 0.01 pH	✓			✓	✓	✓
mV	-1999 mV to 1999 mV	± 1 mV	✓			✓	✓	✓
ISE	0.0 ppm to 1999 ppt	± 1.5%				✓		✓
Dissolved Oxygen	0.00-19.99 mg/L	± 1.5%		✓				✓
Barometric Pressure	225 to 900 mm Hg	± 1.2mm Hg		✓				✓
Conductivity	0.00-199.9 mS	± 1%			✓		✓	✓
Salinity	0.00 – 42.0 ppt NaCl	± 0.1 ppt			✓		✓	✓
TDS	0.00 – 200,000 ppt	± 1%			✓		✓	✓
ORP	-1999 mV to 1999 mV	± 1 mV	✓			✓	✓	✓
Temperature	-5.0 to 105°C (20 to 199.9°F)	± 0.5°C	✓	✓	✓	✓	✓	✓
Bluetooth	10 meters (30 feet)	–				✓	✓	✓
USB	–	–	✓	✓	✓	✓	✓	✓

Meter kits include (as appropriate) Beckman Coulter gel-filled Calomel pHree electrode and ATC probe, dissolved oxygen probe, and/or conductivity probe, along with all necessary solutions.

Hardware Descriptions

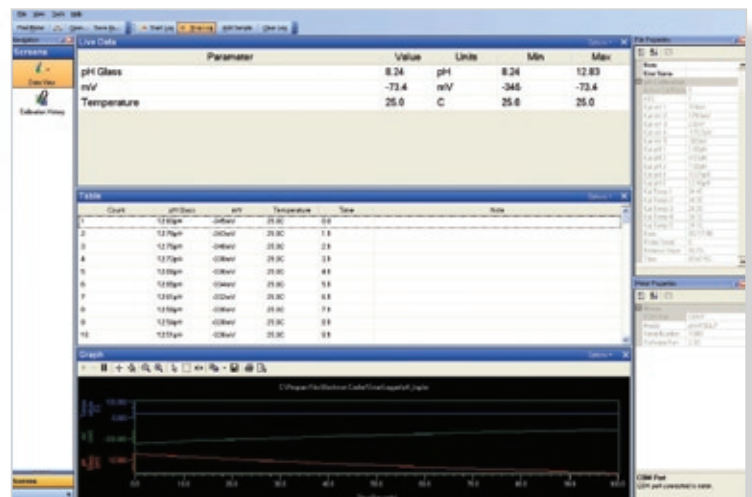
Φ 510 pH/mV Meter Only	A58746	A61770
Φ 510 pH/mV Meter Kit	A58747	A61771
Φ 520 Dissolved Oxygen Meter Only	A58748	A61772
Φ 520 Dissolved Oxygen Meter Kit	A58749	A61773
Φ 530 Conductivity/TDS/Salinity Meter Only	A58750	A61774
Φ 530 Conductivity/TDS/Salinity Meter Kit	A58751	A61775
Φ 550 pH/mV + ISE Meter Only	A58752	A61776
Φ 550 pH/mV + ISE Meter Kit	A58753	A61777
Φ 560 pH/mV + Conductivity/TDS/Salinity Meter Only	A58754	A61778
Φ 560 pH/mV + Conductivity/TDS/Salinity Meter Kit	A58755	A61779
Φ 570 pH/mV + ISE + DO + Conductivity/TDS/Salinity Meter Only	A58756	A61780
Φ 570 pH/mV + ISE + DO + Conductivity/TDS/Salinity Meter Kit	A58757	A61781

Accessories

AC Adapter, 120V, 60Hz, US Plug	A58827	
AC Adapter, 230V, 50Hz, Euro Plug		A61782
Probe Stand	A58758	
Magnetic Stirrer with digital RPM display, 120V, 60Hz, US Plug	A58759	

Meter Software & Accessories

Included SmartLogger II software extends your Beckman Coulter meter to your PC desktop. Transfer stored data, view current measurements, even change modes and perform meter configuration remotely. Data can also be exported in CSV files for importing into Excel® or other programs.



Accessories

Probe Stand

For use with either handheld or benchtop Φ Series meters. A weighted base provides stability when used separately; also includes mounting bracket for direct attachment to Φ 500 Series benchtop meter. Holds up to (4) 12mm diameter probes or electrodes + ATC probe.



Shockproof holster

Adds an extra degree of protection to the Φ 400 Series handheld meter. Silicone “glove” design provides comfortable grip while also providing storage locations for an electrode and temperature probe on the back of the holster.



Magnetic Stirrer

Magnetic stirrer with digital display is reliable and rugged yet has a small footprint on your lab bench. The contemporary design accommodates a wide range of vessel sizes up to one liter. The powerful variable speed motor stirs 1 liter at up to 2,000 rpm.

Measurement Probes & Electrodes

Choose the unmatched quality of Beckman Coulter for your measurement needs. Pick from combination, 3-in-1, reference, indicating, low-ionic strength, ion-selective, and ORP electrodes in a variety of lengths (from micro to flask), shapes (standard, spear-tipped, flat-bulb), body types (glass or epoxy), and reference type (gel-filled or refillable). We also offer dissolved oxygen and conductivity probes specifically designed for the Φ 400 and 500 Series Meters.

Whether you require electrodes for aqueous, non aqueous, suspensions, emulsions, extreme pH measurements or surfaces, you will find the right Beckman Coulter electrode for your application (see Electrode Selection Table on page 15). We maintain a very high level of quality control to ensure that you receive a product with unsurpassed performance. Every electrode must pass a stringent accuracy and rapid response test protocol prior to shipment.

note: all electrodes, except for reference electrodes, are designed to be stored wet (i.e. in storage solution). Dissolved Oxygen, Conductivity and Temperature probes do not require storage solution.





Electrodes

Calomel pHree Electrodes for Biological Applications



Calomel pHree electrodes for biological applications are a mercury-free alternative to traditional calomel electrodes. Electrodes have a silver-ion trap that effectively acts as a third junction to prevent contamination of sample and junction area of electrodes. Unique chemistry allows electrode to deliver comparable performance to calomel electrode, while creating fewer precautions for handling and disposal. Electrodes feature 1m long integrated cable with BNC connector. Electrodes with epoxy body have a protective design in which body extends over glass bulb measuring surface. Uses storage and filling solution A51713.

Description	pH Range	Temperature Range	Body Material	Diameter	Length	Cat. No.
Gel-Filled	0 to 14	0 to 60°C	Epoxy	12 (mm)	150 (mm)	A51705
Gel-Filled	0 to 14	0 to 60°C	Glass	12 (mm)	150 (mm)	A51706
Refillable	0 to 14	0 to 60°C	Epoxy	12 (mm)	150 (mm)	A51707
Refillable	0 to 14	0 to 60°C	Glass	12 (mm)	150 (mm)	A51708
Semi-Micro, Gel-Filled	0 to 14	0 to 60°C	Epoxy	6 (mm)	150 (mm)	A51711
Semi-Micro, Gel-Filled	0 to 14	0 to 60°C	Glass	6 (mm)	150 (mm)	A51712
Flask, Gel-Filled	0 to 14	0 to 60°C	Epoxy	9.5 (mm)	300 (mm)	A51709
Flask, Gel-Filled	0 to 14	0 to 60°C	Glass	9.5 (mm)	300 (mm)	A51710

General Purpose pH Electrodes

Combination General Purpose pH Electrode

For general purpose pH measurements. Features 1m long integrated cable with BNC connector. Electrodes with epoxy body have a protective design in which body extends over glass bulb measuring surface. Uses storage and filling solution A60217.

Description	pH Range	Temperature Range	Body Material	Diameter	Length	Cat. No.
Gel-Filled	0 to 14	0 to 80°C	Epoxy	12 (mm)	150 (mm)	A57177
Refillable	0 to 14	0 to 100°C	Epoxy	12 (mm)	150 (mm)	A57186
Refillable	0 to 14	0 to 100°C	Glass	12 (mm)	150 (mm)	A57181
Semi-Micro, Gel-Filled	0 to 14	0 to 80°C	Epoxy	6 (mm)	150 (mm)	A57180
Semi-Micro, Refillable	0 to 14	0 to 100°C	Epoxy	6 (mm)	150 (mm)	A57187
Semi-Micro, Refillable	0 to 14	0 to 100°C	Glass	6 (mm)	150 (mm)	A57183
Flask, Gel-Filled	0 to 14	0 to 80°C	Epoxy	9.5 (mm)	300 (mm)	A57179
Flask, Refillable	0 to 14	0 to 100°C	Glass	9.5 (mm)	300 (mm)	A57182

3-in-1 Electrode

Combination gel-filled pH electrode with built-in automatic temperature compensation. Features 1m long integrated cable with BNC connector. Rugged epoxy body extends over glass bulb measuring surface for protection. Uses storage solution A60217.

Description	pH Range	Temperature Range	Body Material	Diameter	Length	Cat. No.
3-in-1, Gel-Filled	0 to 14	0 to 70 °C	Epoxy	12 (mm)	150 (mm)	A57198

Combination Double Junction pH Electrode

For pH measurement of sulfides, heavy metals, or other materials that interact with silver. Features 1m long cable with BNC connector. Uses storage solution A60217.

Description	pH Range	Temperature Range	Body Material	Diameter	Length	Cat. No.
Double Junction, Gel-Filled	0 to 14	0 to 80°C	Epoxy	12 (mm)	150 (mm)	A57178

Combination Double Junction Flat-Bulb pH Electrode

For pH measurement in thick or oily samples or surface measurement of gels. Features 1m long integrated cable with BNC connector. Uses storage solution A60217.

Description	pH Range	Temperature Range	Body Material	Diameter	Length	Cat. No.
Double Junction, Gel-Filled, Flat-Bulb	0 to 14	0 to 80°C	Epoxy	12 (mm)	150 (mm)	A57184

Combination Double Junction Spear-Tipped pH electrode

For pH measurement in food and other samples, spear-tipped design with rugged epoxy body features 1m long integrated cable with BNC connector. Uses storage solution A60217.

Description	pH Range	Temperature Range	Body Material	Diameter	Length	Cat. No.
Double Junction, Gel-Filled, Spear-tipped	0 to 14	0 to 80°C	Epoxy	9.5 (mm)	150 (mm)	A57185

Specialty Electrodes

Combination Low Ionic Strength Electrodes

For low ionic solutions with conductivity below 100 microsiemens, such as DI water. Features 1m long integrated cable with BNC connector. Uses storage and filling solution A58729.

Description	pH Range	Temperature Range	Body Material	Diameter	Length	Cat. No.
Refillable	0 to 14	0 to 50°C	Epoxy	12 (mm)	150 (mm)	A57195
Refillable	0 to 14	0 to 50°C	Glass	12 (mm)	150 (mm)	A57196

Combination pHRESH Refillable Flow-on-Demand Electrodes

For pH measurement in highly viscous or “dirty” samples, such as soil, sludges, or slurries. To prevent clogging, junction can be renewed after each use by simply pressing electrode cap to flush junction with filling solution. Ideal for use with TRIS buffers. Electrode with epoxy body has protective design where epoxy body extends over glass measurement bulb. Features 1m long integrated cable with BNC connector. Uses storage and filling solution 511469.

Description	pH Range	Temperature Range	Body Material	Diameter	Length	Cat. No.
Refillable	0 to 14	0 to 100°C	Epoxy	12 (mm)	130 (mm)	511110
Refillable	0 to 14	0 to 100°C	Glass	12 (mm)	125 (mm)	511111

Combination Oxidation Reduction Potential (ORP)

For Oxidation Reduction Potential (ORP) measurements. Features 1m long integrated cable with BNC connector. Rugged epoxy body extends over glass bulb measuring surface for protection. Uses storage solution A60217.

Description	mV Range	Temperature Range	Body Material	Diameter	Length	Cat. No.
Gel-Filled	+/- 1000	0 to 70°C	Epoxy	12 (mm)	150 (mm)	A57197

Indicating and Reference Electrodes

For use when indicating element must physically be separated from reference element to reduce noise, or when a different reference element is needed to precisely match the sample being measured. All electrodes feature a 1 meter long integrated cable; indicating electrodes have BNC connector, reference electrodes have pin connector. Calomel pHree reference electrodes use storage and filling solution A51713; Ag/AgCl reference electrodes use storage and filling solution A60217.

Description	pH Range	Temperature Range	Body Material	Diameter	Length	Cat. No.
Indicating Electrode (Measurement Half Cell)	0 to 14	0 to 100°C	Epoxy	12 (mm)	150 (mm)	A57188
Indicating Electrode (Measurement Half Cell)	0 to 14	0 to 100°C	Glass	12 (mm)	150 (mm)	A57189
Reference, Gel-filled, Calomel pHree	-	0 to 60°C	Epoxy	12 (mm)	150 (mm)	A57190
Reference, Refillable, Calomel pHree	-	0 to 60°C	Glass	12 (mm)	150 (mm)	A57192
Reference, Gel-Filled, Ag/AgCl	-	0 to 80°C	Epoxy	12 (mm)	150 (mm)	A57193
Reference, Refillable, Ag/AgCl	-	0 to 100°C	Glass	12 (mm)	150 (mm)	A57194

Dissolved Oxygen, Conductivity, & Temperature Probes

Conductivity/Salinity/TDS Probe

For use with Beckman Coulter Φ 400 and 500 Series Conductivity meters. Features integrated temperature probe and 1m long cable with locking waterproof connector. Four cell design.

Minimum Sample Flow	Temperature Range	Cell Constant	Body material	Diameter	Length	Immersion Length	Cat. No.
10uS/cm to 200mS/cm	0 to 100°C	0.5	Graphite	16 (mm)	120 (mm)	30 mm	A57201

Dissolved Oxygen Probe

For use with Beckman Coulter Φ 400 and 500 Series Disolved Oxygen meters. Features integrated temperature probe and 1m long cable with locking waterproof connector. Uses refill solution A58726.

Description	Minimum Sample Flow	Temperature Range	Diameter	Length	Immersion Length	Cat. No
Dissolved Oxygen Probe	5 cm/sec	0 to 50°C	16 (mm)	120 (mm)	25.4 mm	A57199
Dissolved Oxygen Probe Replacement Cap with Membrane	-	-	-	-	-	A58728

Temperature Probe, Φ Series Meters

Temperature Probe designed for use with Beckman Coulter Φ Series meters. Features 1m long integrated cable.

Description	Diameter	Temperature Range	Body Material	Length	Cat. No.
Temperature Probe	6 (mm)	0 to 100° C	Epoxy	150 (mm)	A58722

Ion Selective Electrodes (ISE)

For determination of specific ions in solution. All electrodes feature refillable epoxy body construction and 1m long integrated cable with BNC connector. Filling solutions come in 125ml bottles; all standards and Ion Strength Adjustment Buffers (ISABs and TISAB) come in 475ml bottles, except for Fluoride (3.75L plastic container). ISE Refill Solutions and Standards are included with ISE electrodes.

Ion	Sensor	Filling Solution	Standard Solution	ISAB/ TISAB	Temp Range	Diameter	Length	Cat No.
Ammonia	Gas-Sensing	511179	511184	-	0 to 50°C	12 (mm)	140 (mm)	511130
Ammonia Membrane Replacement Kit	-	-	-	-	-	-	-	511131
Chloride	Solid-State	511176	511180	511190	0 to 80°C	12 (mm)	140 (mm)	511140
Fluoride	Solid-State	511175	511181	511191	0 to 80°C	12 (mm)	140 (mm)	511141
Ammonium	Polymer Membrane	511177	511182	511192	0 to 50°C	12 (mm)	140 (mm)	511142
Nitrate	Polymer Membrane	511178	511183	511193	0 to 50°C	12 (mm)	140 (mm)	511143

Refill Solutions and Standards

Electrode and Probe Refill solutions

Solutions are compatible with Beckman Coulter electrodes and probes.

Description	Volume	Cat. No.
General Purpose Electrode Refill Solution (3.5M KCl/AgCl)	Four 118 mL (4 oz.) Bottles	A60217
Calomel pHree Electrode Refill and Storage Solution (KNO3)	Four 118 mL (4 oz.) Bottles	A51713
pHRESH Electrode Refill and Storage Solution (3.5M KCl)	One 118 mL (4 oz.) Bottle	511469
Low Ionic Strength Electrode Refill Solution (.1M KCl)	Four 118 mL (4 oz.) Bottles	A58729
Dissolved Oxygen Probe Refill Solution (2M NaCl)	One 60 mL (2 oz.) Bottle	A58726

Conductivity Standard Solutions

Supplied in 946 mL (1 qt.) polyethylene bottles.
Accuracy: + 1% at 25°C (77°F). All conductivity standards are NIST traceable.

Conductivity, µmhos (µS)	Cat. No.
100	A58730
1,000	A58731
10,000	A58732
35,000	A58733

pH Buffer, Solutions

For Standardizing pH measurements. Color-coded for easy identification. All buffers are NIST traceable. 1 and 5 gallon containers require faucet 863217.

pH Value	Color	Size	Cat. No
4	Red	6 x 475 mL (6x16oz.)	582517
4	Red	3.75 L (1 gal.)	566001
4	Red	18.75 L (5 gal.)	582822
7	Green	6 x 475 mL (6x16oz.)	582521
7	Green	3.75 L (1 gal.)	566003
7	Green	18.75 L (5 gal.)	582823
10	Blue	6 x 475 mL (6x16oz.)	582525
10	Blue	3.75 L (1 gal.)	566005
10	Blue	18.75 L (5 gal.)	582824
4 7 10	Red Green Blue	2x475 mL (2x16oz.) 3x475 mL (3x16oz.) 1x475 mL (1x16oz.)	566575 <i>variety pack containing some of each buffer</i>
Faucet for 1 gallon and 5 gallon pH container			863217

pH Buffer, Powdered

For standardizing pH measurements.
Each vial makes 500 mL. All buffers (except pH 12.45) are NIST traceable.

pH Value	Size	Cat. No
4	12 pack	3005
6.86	12 pack	3006
7	12 pack	3007
7.41	12 pack	3008
9.18	12 pack	3009
10.01	12 pack	3019
12.45	12 pack	3010

Electrode Accessories

Description	Length	Cat. No
BNC Cable Extension	2 m (6.6 ft.)	511322
BNC Cable Extension	5 m (16.4 ft)	511323

Electrode Selection Guide

	Epoxy Body		Glass Body		For Additional Information See
	Gel-Filled	Refillable	Gel-Filled	Refillable	
Biologicals, Tris, Hepes, and Other Buffers					
Standard Length (12x150mm)	A51705	A51707	A51706	A51708	Combination Calomel pHree Electrode, page 10
Semi-Micro Length (6x150mm)	A51711	-	A51712	-	Combination Calomel pHree Electrode, page 10
Flask Length (9.5x300mm)	A51709	-	A51710	-	Combination Calomel pHree Electrode, page 10
General Purpose					
Standard Length (12x150mm)	A57177	A57186	-	A57181	Combination General Purpose Electrode, page 11
Semi-Micro Length (6x150mm)	A57180	A57187	-	A57183	Combination General Purpose Electrode, page 11
Flask Length (9.5x300mm)	A57179	-	-	A57182	Combination General Purpose Electrode, page 11
General Purpose with Automatic Temperature Correction (ATC)					
Standard Length (12x150mm)	A57198	-	-	-	3-in-1 Electrode, page 11
Sulfides, Heavy Metals, or other materials that interact with silver					
Standard Length (12x150mm)	A57178	-	-	-	Combination Double Junction Electrode, page 11
Thick or Oily Samples, or where surface measurement is required					
Standard Length (12x150mm)	A57184	-	-	-	Combination Double Junction Flat Bulb Electrode, page 11
Meats, cheeses, or soils					
Spear-Tip (9.5x150mm)	A57185	-	-	-	Combination Double Junction Spear Tipped Electrode, page 11
Highly viscous or "dirty" samples (soil, sludges, slurries)					
Standard Length (12x150mm)	-	511110	-	511111	Combination pHRESH Electrode, page 12
Low Ionic Strength					
Standard Length (12x150mm)	-	A57195	-	A57196	Combination Low Ionic Strength Electrode, page 12
Oxidation Reduction Potential					
Standard Length (12x150mm)	A57197	-	-	-	Combination Oxidation Reduction Potential Electrode, page 12
Indicating and Reference electrodes for difficult samples					
Indicating electrodes (no reference) (12x150mm)	A57188	-	A57189	-	Indicating and Reference Electrode, page 12
Reference electrodes/calomel pHree (12x150mm)	A57190	-	-	A57192	Indicating and Reference Electrode, page 12
Reference electrodes KCl/ AgCl (12x150mm)	A57193	-	-	A57194	Indicating and Reference Electrode, page 12
Ion Specific Applications					
Ammonia (12x140mm)	-	511130	-	-	Ion Selective Electrodes, page 13
Chloride (12x140mm)	-	511140	-	-	Ion Selective Electrodes, page 13
Fluoride (12x140mm)	-	511141	-	-	Ion Selective Electrodes, page 13
Ammonium (12x140mm)	-	511142	-	-	Ion Selective Electrodes, page 13
Nitrate (12x140mm)	-	511143	-	-	Ion Selective Electrodes, page 13
Conductivity/Salinity/TDS					
Conductivity/Salinity/TDS Probe (16x120mm)	A57201	-	-	-	Conductivity/Salinity/TDS Probe, page 13
Dissolved Oxygen					
Dissolved Oxygen Probe (16x120mm)	-	A57199	-	-	Dissolved Oxygen Probe, page 13
Temperature Probe					
Temperature Probe for Φ Series meter (6x150mm)	A58722	-	-	-	Temperature Probe, page 13

Australia, Gladesville (61) 2 9844-6000 Canada, Mississauga (1) 905 819 1234 China, Beijing (86) 10 6515 6028
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