

Electrode Selection Guide

The right electrode

While the basic principles of pH measurement are simple, getting an accurate measurement can often be challenging. There are hundreds of applications for pH measurement and each presents different problems. Selecting the right electrode can make the most difficult samples easy to accurately measure.

Gel-filled vs refillable electrodes

Gel-filled electrodes are convenient and easier to maintain than refillable liquid-filled electrodes. However the liquid-filled electrode will provide a faster response. In addition the user can adjust the fill solution to optimize performance, for example adding glycol for better performance at low temperatures.

Glass vs epoxy body electrodes

Glass body electrodes will typically be able to withstand higher temperatures (100°C as opposed to 80°C for epoxy). In addition, the glass design offers better sealing, fusing glass to glass instead of relying on adhesives. The epoxy body however is less susceptible to breakage. **Note:** Even though the body of an epoxy electrode is plastic, the measuring bulb will still be glass.

Body design

Oakton® offers electrodes in a variety of lengths and diameters. Small diameter probes are ideal for measuring samples in test tubes. Electrodes with wider barrels, greater weight, and longer cable lengths are available for measurements in streams, lakes, or ponds.

Bulb design

Oakton pH electrodes are handblown by experienced craftsmen. The bulb shape can be modified to provide a semi-dome for increased ruggedness, a spear tip for soft penetration applications, or even a flat surface. In addition, the glass formulation can provide increased range.

Reference design

To achieve accurate results, the reference electrode must allow electrolyte solution (or ions, in the case of a gel-filled electrode) to flow into the sample. Depending on the size and material of the junction, this flow rate can be increased or kept to a minimum. Faster flow produces stable readings faster but results in greater service requirements or premature electrode failure.

Reference chemistry

The leading cause of electrode failure is reference contamination. The most popular electrodes use a silver chloride (AgCl) reference solution that can react with heavy metals, sulfides, and organics. If your application has any of these contaminants present, be sure to select either a double-junction or calomel electrode. The double-junction electrode uses a second internal reference junction, restricting the AgCl solution to the upper chamber where it is isolated from the sample. The calomel electrode replaces the AgCl with HgCl.



Double-junction, glass-body, refillable pH electrode 35805-04

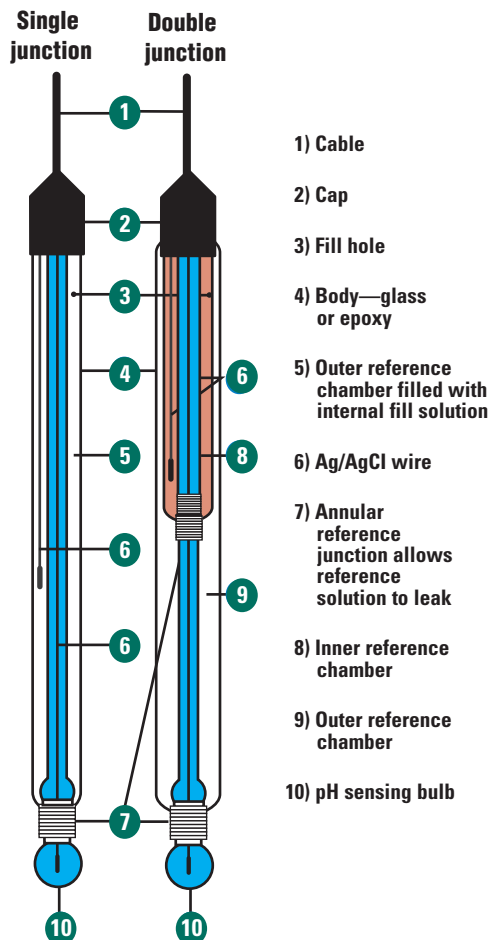


Single-junction, epoxy-body, gel-filled pH electrode 35808-71



Submersible pH electrode 35805-24

ph Electrode Anatomy



Electrodes for Laboratory and Field Applications



All Oakton® electrodes have a BNC-connected combination reference cell and measuring cell in one housing for easy use

Oakton offers a variety of electrodes for your general-purpose and specialty laboratory applications. The “Application Guide” below provides information to help you find the electrode that best fits your application. Carefully choose the electrode best suited for your application to ensure accurate pH measurements. The guide only offers suggestions—contact your Oakton Technical Product Specialist for more specific recommendations or clarification. Shipping dimensions for all electrodes are 9.25" x 1.75" x 2.75". Shipping weight 0.5 lb each.

Application Guide

Application	Suggested electrode
Drinking water	Standard Ag/AgCl with single junction
Wastewater, solutions with heavy metals	Double junction solutions
Biological samples, proteins, and Tris buffers	Calomel or double junction
Pharmaceuticals	
Low ionic strength samples	Flushable or sleeve-type refillable electrode
Boiler feed water and distilled water	
Soil samples	Soil electrode, double junction
Moist flat surfaces, concrete, cheese, agar, paper, and skin	Flat-surface, calomel
Semisolid samples, food, fruits, cheese, and meat	Speartip
Nonaqueous samples, solvents, alcohols, viscous samples, slurries, suspended solids, sludges, emulsions and oils, paints, and inks	Sleeve-type, flushable, or double junction electrode and fill with electrolyte containing methanol
Environmental, surface water, neutralization tanks	Double junction submersible

Use and Care of Electrodes

Handling—Electrodes should be rinsed between samples with distilled or deionized water. Never wipe an electrode—wiping can cause erroneous readings due to static charges. Gently blot the end of the electrode with lint-free paper to remove excess water.

Refillable Electrodes—see page 32 for reference solutions.

The filling solution in refillable electrodes should be filled up to, but not past, the refill hole. Make sure the refill hole is left open when measuring to ensure that the fill solution flows properly through the reference junction.

Storage—see page 29 for storage products.

Always keep your pH electrode moist. We recommend that you store your electrode in an electrode storage solution of 4 M KCl (see page 29). If 4 M KCl is not available, use a pH 4 or 7 buffer solution. **DO NOT** store electrode in distilled or deionized water—this will cause ions to leach out of the glass bulb and reference electrolyte, rendering your electrode useless.

Electrode Types

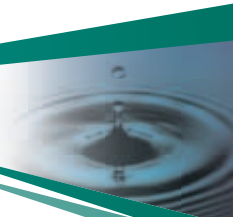
Built-in temp sensor	Use electrode with the following meters
Standard: Most economical electrode; includes cable.	
No	pHTestr BNC, pH 5/6, Ion 6, pH 10/11/100/110, pH 300/310, pH 500/510, Ion 510, pH 1000/1100/2100/2500, pH/DO 300, pH/CON 300, pH/CON 510, pH 600/610/620, PC600, PD600, PDC650, and non-Oakton meters with BNC pH electrodes
All-in-One: Combination pH electrode/temperature sensor; includes cable.	
Yes	Standard: pH 10/100, pH 500, pH 1000/2500
	Acorn®: pH 5/6, Ion 6, pH 11/110, pH 510, Ion 510, pH 1100/2100
	Waterproof: pH 300/310, pH/CON 300, pH/CON 510 WP600: pH 600/610/620, PC600, PD600, PCD650
Direct connect: Electrode connects directly to meter; no cable.	
No	pHTestr BNC
ORP: Takes mV readings; includes cable.	
No	Ion 5/6, pH 6, pH 10/100, pH 300/310, pH 500, pH 510, Ion 510, pH 1000/2100/2500, pH/CON 510
ISE: Takes ion-selective readings; includes cable. See pages 40-41 for ISEs	
No	Ion 5/6, pH 10/100, pH 300/310, pH 500, pH/CON 510; pH 510, Ion 510, pH 1000/1100/2100/2500

Oakton electrodes are shipped with a protective electrode storage bottle to help prevent cracking or scratching, and to keep the bulb moist. Remove the electrode storage bottle before using your electrode. Keep your electrode in the bottle for long-term storage—just fill the bottle with enough 4 M KCl solution to cover the glass bulb and replenish as needed.

Temperature Probes

Order a temperature probe if you have an electrode without a built-in temperature sensor and you want to take readings with Automatic Temperature Compensation (ATC). Separate temperature probes offer faster temperature response and lower pH electrode replacement cost.

Catalog number	Use with
WD-35615-05	pH 10, pH 100, pH 500, pH 1000, and pH 2500 meters
WD-35613-05	pH 5, pH 6, and Ion 6 Acorn® meters; pH 11, pH 110, pH 510, Ion 510, pH 1100, and pH 2100 benchtop meters
WD-35618-05	pH 300, pH 310, and pH/CON 300 waterproof meters; pH/CON 510 benchtop meter
WD-35418-05	pH 600/610/620, PC600, PD600, PCD650 meters



Electrode storage bottle

All 12-mm dia electrodes come with one electrode storage bottle and solution. Order additional storage bottles as needed.

WD-35805-50 Electrode storage bottle



Double junction, glass-body, refillable pH electrodes

▼ Use for high-grade laboratory applications

These laboratory-grade electrodes are ideal for testing dirty water and solutions with heavy metals or organics. Annular-type junction provides faster electrode response. Order replacement electrode fill solution on page 29.

Specifications & Ordering Information

Max temperature: 100°C Diameter: 12 mm

Catalog number	Type*	Cable length
Standard range of 0 to 12 pH		
WD-35805-04	Standard	3 ft
WD-35801-74	All-in-One Standard	3 ft
High range of 0 to 14 pH		
WD-35805-08	Standard	3 ft
WD-35801-79	All-in-One Standard	3 ft
WD-35811-74	All-in-One Acorn	3 ft

Single junction, epoxy-body, gel-filled pH electrodes

▼ Our most economical electrodes!

▼ 0 to 14 pH models available—use for high sodium/high pH solutions

These economical electrodes are ideal for field, clean water, and general-purpose applications. They feature a rugged epoxy housing. Pin-type junction provides low electrolyte flow for long life.

Specifications & Ordering Information

Max temperature: 80°C (except 35801-00: 70°C)

Diameter: 12 mm (except 35804-50: 12.5 mm)

Catalog number	Type*	Cable length
Standard range of 0 to 12 pH		
WD-35801-00	Standard	3 ft
WD-35801-71	All-in-One Standard	30"
WD-35811-71	All-in-One Acorn®	30"
WD-35808-71	All-in-One Waterproof	30"
WD-35816-71	All-in-One WP600	30"
WD-35804-00	Direct connect	No cable
High range of 0 to 14 pH		
WD-35805-05	Standard	3 ft
WD-35801-76	All in One	30"



Double junction, epoxy-body, refillable pH electrodes

▼ Features flushable Teflon® junction—use with substances that ordinarily clog standard electrodes

Ideal for testing dirty water, slurries, oils, paints, pastes, low ionic strength solutions, and solutions with heavy metals or organics. Flushable annular junction lets you refresh junction by pressing electrode cap—cleans clogs instantly.

Specifications & Ordering Information

Range: 0 to 12 pH Max temperature: 80°C Diameter: 12 mm

Catalog number	Type*	Cable length
WD-35805-09	Standard	3 ft
WD-35801-80	All-in-One Standard	3 ft

Double junction, epoxy-body, gel-filled pH electrodes

▼ Use to test dirty water and for other rugged field applications

▼ 0 to 14 pH models available—use for high sodium/high pH solutions

Ideal for most applications, including dirty field water and solutions with heavy metals or organics. Pin-type junction provides low electrolyte flow for long life.

Specifications & Ordering Information

Max temperature: 80°C Diameter: 12 mm

Catalog number	Type*	Cable length
Standard range of 0 to 12 pH		
WD-35805-01	Standard	3 ft
WD-35641-51	Standard, poly-gel	3 ft
WD-35801-72	All-in-One Standard	30"
WD-35811-72	All-in-One Acorn	30"
WD-35808-72	All-in-One Waterproof	30"
WD-35816-72	All-in-One WP600	30"
WD-35804-02	Direct connect	No cable
High range of 0 to 14 pH		
WD-35805-06	Standard	3 ft
WD-35801-77	All-in-One Standard	30"



Glass-body, spear-tip pH electrodes

▼ Test gels, semisolids, and plant or animal materials

Spear tip feature is ideal for testing semisolids. Choose single or double junction electrodes; both have an annular-type junction for faster electrode response.

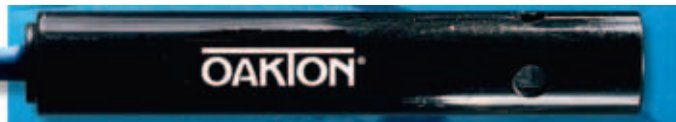
Specifications & Ordering Information

Range: 0 to 12 pH Max temperature: 100°C Diameter: 12 mm OD, 8 mm tip

Catalog number	Type*	Junction	Cable length
WD-35805-18	Standard	Double	3 ft
WD-35804-06	Standard	Single	3 ft

*See "Electrode Types" chart on facing page.

Electrodes for Laboratory and Field Applications



Submersible pH electrodes

▼ Completely submersible up to 9 feet

These ABS plastic electrodes are ideal for field applications. Use double junction for testing dirty water and solutions with heavy metals or organics. Completely submersible—including the extra-long 10-ft cable. Annular junction provides fast response and resists pressure effects of submersion.

Specifications & Ordering Information

Range: 0 to 12 pH Max temperature: 80°C Diameter: 25 mm

Catalog number	Type*	Junction	Cable length
WD-35805-24	Standard	Double	10 ft
WD-35801-85	All-in-One	Double	10 ft
WD-35805-23	Standard	Single	10 ft
WD-35805-25	ORP	Single	10 ft



Small-diameter pH electrodes

▼ Ideal for measurements in test tubes, NMR tubes, and other applications where space is limited

These electrodes feature a diameter from 6 to 9 mm—ideal for test tube applications. Replacement electrode fill solution for refillable electrodes is available on facing page.

Specifications & Ordering Information

Range: 0 to 12 pH
Max temperature: 80°C epoxy body or 100°C glass body

Catalog number	Type*	Junction	Dia x L	Cable length
Epoxy-body electrodes, sealed				
WD-35805-22	Standard	Single	6 x 220 mm	3 ft
WD-35804-01	Direct connect	Single	9 x 100 mm	No cable
WD-35804-03	Direct connect	Double	9 x 100 mm	No cable
Epoxy-body electrodes, refillable				
WD-35804-05	Direct connect	Double	9 x 100 mm	No cable
Glass-body electrodes, refillable				
WD-35805-21	Standard	Double	8 x 325 mm	3 ft



Epoxy-body ORP electrodes

▼ Use to take mV readings

Choose a single-junction electrode for field, clean water, and general-purpose applications; choose a double junction electrode for most applications including field, dirty water, heavy metals, and organics. Both models have a pin-type junction that provides low electrolyte leakage. Use the gold disk sensor for ozone applications.

Specifications & Ordering Information

Range: ±2000 mV
Max temperature: 80°C (except 35805-13: 70°C) Diameter: 12 mm

Catalog number	Type*	Junction	Cable length
Platinum band sensor			
WD-35805-13	Standard	Single	3 ft
WD-35805-15	Standard	Double	3 ft
Gold disk sensor			
WD-35805-27	Standard	Double	3 ft



Calomel pH electrodes

▼ Calomel reference solution is ideal for biotechnology applications with organics, proteins, Tris buffers, or metals

These electrodes use a Hg/Cl reference to withstand solutions that react with the silver typically used in pH reference electrodes. Ideal for solutions containing organics. Choose from pin or annular junction. Pin-type junction provides low electrolyte flow for long life. Annular-type junction provides faster electrode response. Replacement electrode fill solution for refillable electrodes is available on facing page.

Specifications & Ordering Information

Range: 0 to 12 pH Max temperature: 70°C Diameter: 12 mm

Catalog number	Type*	Cable length
Epoxy-body electrodes, gel-filled, pin junction		
WD-35805-10	Standard	3 ft
WD-35801-81	All-in-One Standard	3 ft
WD-35804-09	Direct connect	No cable
Glass-body electrode, gel-filled, annular junction		
WD-35805-11	Standard	3 ft
Glass-body electrodes, liquid-filled, refillable, annular junction		
WD-35805-12	Standard	3 ft
WD-35801-82	All-in-One Standard	3 ft
WD-35804-69	Direct connect	3 ft

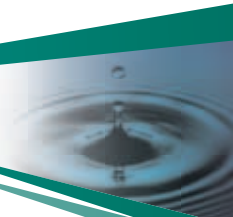
Electrode storage bottle

All 12-mm dia electrodes come with one electrode storage bottle and solution. Order additional storage bottles as needed.

WD-35805-50 Electrode storage bottle



*See "Electrode types" chart on page 28.



Flat surface, single-junction pH electrodes

▼ Ideal for flat surface measurements such as paper or skin

These single-junction electrodes are available with sealed epoxy body, or refillable glass body. Replacement electrode fill solution for refillable electrode is available on facing page.

Specifications & Ordering Information

Range: 0 to 12 pH

Max temperature: 80°C epoxy body or 100°C glass body Diameter: 12 mm

Catalog number	Type*	Cable length
Epoxy-body electrodes, sealed		
WD-35805-19	Standard	3 ft
WD-35804-10	Direct connect	No cable
Glass-body electrode, refillable		
WD-35805-20	Standard	3 ft



Semi-dome, epoxy-body, gel-filled pH electrodes

▼ Rugged semi-dome bulb design

Special close-knit ceramic junction prevents back diffusion problems and resists clogging. Vortexing junction design enhances electrolyte flow and self-cleans in flowing applications. Epoxy body; polymer gel reference fill won't break down over time, enhancing electrode performance and longevity.

Specifications & Ordering Information

Range: 0 to 13 pH Max temperature: 100°C Diameter: 12 mm

Catalog number	Type*	Junction	Cable length
WD-35808-88	All-in-One Waterproof	Single	3 ft
WD-35808-89	All-in-One Waterproof	Double	3 ft



Polymer gel, single-junction pH electrode

▼ Polymer gel reference fill won't break down over time, enhancing electrode performance and longevity

Specifications & Ordering Information

Range: 0 to 13 pH Max temperature: 100°C Diameter: 12 mm

Catalog number	Type*	Cable length
WD-35808-90	All-in-One Waterproof	3 ft



Sleeve-type, single-junction, refillable pH electrode

▼ Ideal for viscous liquids and low ionic strength samples

Sleeve design gives high electrolyte flow. Unique reference design and fill solution minimize drift and give excellent performance at high temperatures.

Specifications & Ordering Information

Range: 0 to 12 pH Max temperature: 100°C Diameter: 12 mm

Catalog number	Type*	Cable length
WD-35805-26	Standard	3 ft

*See "Electrode Types" chart on page 28.

Oakton® Electrode Care

- ▼ Extend the life of your electrode, increase speed of response, and get accurate readings
- ▼ Solutions to clean, store, and fill electrodes

WD-00653-04 pH electrode storage solution, one pint. Use with saver bottles; keep bulb moist for quicker, more accurate pH readings

WD-00653-06 pH/ORP electrode cleaning solution, one pint. Removes build-up from electrodes to maintain bulb sensitivity

WD-35805-50 Replacement pH electrode saver bottle. For pH electrodes up to 12 mm dia. 44.5 mm H x 25.4 mm dia

WD-35803-73 Reference fill solution for single junction pH electrodes. 4 M KCl saturated with AgCl, 125 mL

WD-35803-74 Reference fill solution for double junction or calomel reference refillable pH electrodes. 4 M KCl, 125 mL

WD-35803-83 Reference fill solution, lithium chloride (LiCl)/methanol, for double junction refillable pH electrodes. Use where organics are present. 125 mL

WD-35803-84 Reference fill solution, KCl with glycerol, for double junction refillable pH electrodes. Use for low-temperature samples. 125 mL



00653-04



00653-06



35805-50

Accessories

WD-35820-64 In-line threaded housing. Use to install any 12-mm diameter electrode into pipe for in-line use or submersible monitoring; 3/4" NPT(M), nylon

Ion-Selective Electrodes and Solution Kits

Ion-Selective Electrodes

Oakton® has a large selection of ion-selective electrodes (ISEs) to suit a wide variety of applications. Each electrode has a typical response time of 20 to 30 seconds but will vary with solution concentration. Oakton offers four electrode types: membrane, solid-state, gas sensing, and glass bulb. Gas sensing electrodes also include replacement membranes.

Choose from single- or double-junction electrodes. Single-junction electrodes are ideal for clean water applications. Use double-junction electrodes for testing dirty water and solutions with heavy metals or organics. All electrodes are refillable and include 15 mL of electrolyte and a filling pipette. Solid-state electrodes also include polishing strips.

Use these ion-selective electrodes (ISEs) with:

Ion 510 benchtop meter (see page 20)

pH/Ion 2100 benchtop meter (see page 22)

Acorn® Ion handheld meters (see page 12)

Or use with any other ion meter, or with any meter with 0.1-mV resolution.

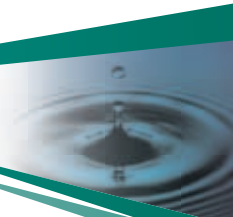


Epoxy-body, double-junction fluoride electrode 35812-18

Ordering Information

Ion	Electrodes			Solution Kits†			
	Epoxy body, single junction	Epoxy body, double junction	Glass body, double junction	Single-junction solution kit	Double-junction solution kit	Replacement calibration standard	Replacement ISA
Ammonia NH₃ High-purity power station water, fish tanks, sea water, wastewater, plating baths, air/stack gases, and biological samples. Range: 17,000 to 0.01 ppm Type: gas sensing	WD-35802-00	—	—	WD-35802-50*	—	WD-35803-01	—
Ammonium NH₄⁺ Boiler feed water, natural water and fertilizers. User must supply calibration standard. Range: 18,000 to 0.1 ppm Type: polymer membrane	WD-35802-02	WD-35812-02	WD-35802-03	WD-35802-52	WD-35802-53	—	WD-35803-53
Bromide Br⁻ Water, wine, soil, plant tissue, blood electrolytes, and clinical analysis. Range: 79,000 to 0.4 ppm Type: solid-state	WD-35802-04	WD-35812-04	WD-35802-05	WD-35802-54	WD-35802-55	WD-35803-03	WD-35803-51
Cadmium Cd²⁺ Plating baths. User must supply calibration standard. Range: 11,200 to 0.01 ppm Type: solid-state	WD-35802-06	WD-35812-06	WD-35802-07	WD-35802-56	WD-35802-57	—	WD-35803-51
Calcium Ca²⁺ Water softening systems, boiler feed water, drinking/mineral water, blood electrolytes, clinical analysis, and food applications. Range: 40,000 to 0.2 ppm Type: polymer membrane	WD-35802-08	WD-35812-08	WD-35802-09	WD-35802-58	WD-35802-59	WD-35803-05	WD-35803-52
Carbon Dioxide CO₂ and Carbonate CO₃²⁻ Soft drinks/carbonated beverages, wine, beer, fermentation processes, bacterial cultures. Range: 440 to 4.4 ppm Type: gas sensing	WD-35802-10	—	—	WD-35802-60	—	WD-35803-07	WD-35803-55
Chloride Cl⁻ River/tap water, plant tissue, soils, boiler feed water, blood electrolytes, clinical analysis, sweat, urine, cement, plating baths, and food samples. Range: 35,500 to 1.8 ppm Type: solid-state	WD-35802-12	WD-35812-12	WD-35802-13	WD-35802-62	WD-35802-63	WD-35803-09	WD-35803-51
Copper Cu²⁺ Plating baths and water Range: 6350 to 6.4 x 10 ⁻⁴ ppm Type: solid-state	WD-35802-14	WD-35812-14	WD-35802-15	WD-35802-64	WD-35802-65	WD-35803-11	WD-35803-51
Cyanide CN⁻ Plating baths, wastewater and plant tissue. User must supply calibration standard. Range: 260 to 0.13 ppm Type: solid-state	WD-35802-16	WD-35812-16	WD-35802-17	—	—	—	WD-35803-50
Fluoride F⁻ Drinking/natural water, wastewater, air/stack gases, acids, sea water minerals, soils, food, biological fluids, toothpaste/mouthwash, coal, carbonated beverages, and bone. Range: saturated to 0.02 ppm Type: solid-state	WD-35802-18	WD-35812-18	WD-35802-19	WD-35802-68	WD-35802-69	WD-35803-13	WD-35803-58

*Ammonia solution kit does not include ISA. †Contact your authorized Oakton Distributor for replacement electrolyte solutions.



Solution Kits

Be sure to select both the electrode and solution kit to complete your measurement system. Solution kits contain the solutions and accessories needed for calibration, sample preparation, and measurement of ion concentration and activity. All solutions are supplied with MSDS (Material Safety Data Sheet) and have a value of 1000 ppm. Make serial dilutions for lower values using the ISE labware kit 35613-60 (at right). Solution kits include replacement reference electrolyte, ISA (ionic strength adjustor)*, calibration standard, and filling pipette. Solution kits for solid-state electrodes also include polishing strips. Solution kits for gas sensing electrodes also include replacement membranes.



ISE Labware Kit



Kit contains beakers, volumetric flask, pipette, and pipette bulb needed for serial dilution of ISE standards and ISA additions.

WD-35613-60 ISE labware kit

Ordering Information

Ion	Electrodes			Solutions [†]			
	Epoxy body, single junction	Epoxy body, double junction	Glass body, double junction	Single-junction solution kit	Double-junction solution kit	Replacement calibration standard	Replacement ISA
Fluoroborate BF₄⁻ Plating baths (boron analysis) Range: 10,800 to 0.1 ppm Type: polymer membrane	WD-35802-20	WD-35812-20	WD-35802-21	WD-35802-70	WD-35802-71	WD-35803-15	WD-35803-60
Iodide I⁻ Milk, feeds, plants and pharmaceuticals. Range: 127,000 to 6 x 10 ⁻³ ppm Type: solid-state	WD-35802-22	WD-35812-22	WD-35802-23	WD-35802-72	WD-35802-73	WD-35803-17	WD-35803-51
Lead Pb⁺² Plating baths and organic compounds. Range: 20,700 to 0.2 ppm Type: solid-state	WD-35802-24	WD-35812-24	WD-35802-25	WD-35802-74	WD-35802-75	WD-35803-20	WD-35803-56
Nitrate NO₃⁻ Surface/drinking water, sewage effluent, soil extracts, fertilizers, plant tissue, meat, potatoes, spinach, beets, baby food. Range: 62,000 to 0.5 ppm Type: polymer membrane	WD-35802-30	WD-35812-30	WD-35802-31	WD-35802-78	WD-35802-79	WD-35803-24	WD-35803-60
Nitrogen Oxide NO_x Air and stack gases. Range: 220 to 0.2 ppm Type: gas sensing	WD-35802-32	—	—	WD-35802-82	—	WD-35803-26	WD-35803-57
Perchlorate ClO₄⁻ Explosives and solid propellants. Range: 98,000 to 0.7 ppm Type: polymer membrane	WD-35802-34	WD-35812-34	WD-35802-35	WD-35802-84	WD-35802-85	WD-35803-28	WD-35803-60
Potassium K⁺ Wastewater, river/tap water, blood electrolytes, clinical analysis, saliva, serum, fertilizers, soils, and wines. Range: 39,000 to 0.04 ppm Type: polymer membrane	WD-35802-38	WD-35812-38	WD-35802-39	WD-35802-88	WD-35802-89	WD-35803-30	WD-35803-53
Silver/Sulfide Ag⁺/S⁻² Sewage effluent, soils, sediments, plating baths and photographic fixing solution. User must supply solutions for sulfide. Range: 107,900 to 0.01 ppm Type: solid-state	WD-35802-40	WD-35812-40	WD-35802-41	WD-35802-90	WD-35802-91	WD-35803-32	WD-35803-51
Sodium Na⁺ Steam condensates in power plants, blood electrolytes, clinical analysis, serum, foods, wine, glass, sea water, swimming pools, fish farms and aquariums. Range: 23,000 to 0.2 ppm Type: glass bulb	WD-35802-42	WD-35812-42	WD-35802-43	WD-35802-92	WD-35802-93	WD-35803-34	WD-35803-54
Surfactant X⁺, X⁻ Detergents, dishwashing liquids, cleaning supplies, and food products. For titration only. Range: 12,000 to 1.0 ppm Type: polymer membrane	WD-35802-44	WD-35812-44	WD-35802-45	WD-35802-94	WD-35802-95	WD-35803-35	WD-35803-59
Water hardness Ca⁺², Mg⁺² Water softening systems, boiler feed water, drinking/mineral water, blood electrolytes, clinical analysis, and food applications. Range: 40,000 to 0.4 ppm Type: polymer membrane	WD-35802-48	WD-35812-48	WD-35802-49	WD-35802-98	WD-35802-99	WD-35803-05	WD-35803-52

*Ammonia solution kit does not include ISA. [†]Contact your authorized Oakton Distributor for replacement electrolyte solutions.

NOVA-TECH
INTERNATIONAL

800 Rockmead Dr Ste 102 • Houston, TX 77339-2112
Tel: (281) 359-8538 • Toll Free Tel: (866) 433-6682
Fax: (281) 359-0084 • Toll Free Fax: (866) 433-6684
sales@novatech-usa.com • www.novatech-usa.com