Combination ISE

Ion-selective electrodes are responsive to concentration of particular ions in the test liquid and are variable-potential electrodes. They are used in conjunction with reference electrodes to measure the concentration of particular ions. HORIBA's years of experience and know-how in this field are behind the wide range of ion electrodes we offer.

When measurements are made using an ion meter, calibrating it with various standard solutions will give direct readings of the ion concentration. Note that since volume-detection level changes with temperature, measurements must be taken at a fixed temperature.

Type	Measurement Range	Selection Coefficient
Ammonia ion electrode (combination) **5002A-10C**  3014093560 Overall length: 161 mm Diameter of probe: 15 mm Connector: BNC	1. 0.1 to 1,000 mg/L NH_3 2. Adjust more than pH 12 3. 0 to 50°C 4. Within 30 seconds when substituting low concentration to high concentration Within 2 minutes when substituting high concentration to low concentration	———
Chloride ion electrode (combination) **6560-10C**  3014093430 Overall length: 150 mm Diameter of probe: 16 mm Connector: BNC	1. 0.35 to 35,000 mg/L Cl^- (10^{-5} to 1 mol/L Cl^-) 2. 350 mg/L (10^{-2} mol/L) Cl^-, pH 3 to 11 3. 0 to 50°C 4. Within 5 seconds	$S_2O_3^{2-}$, S^{2-}, I^-, Ag^+, Hg^{2+} = Not acceptable SCN^-= 0.3, MnO_4^-= 0.1 Br^-= 0.03 NO_3^-, F^-, HCO_3^-, SO_4^{2-}, PO_4^{2-}= 1,000
Fluoride ion electrode (combination) **6561-10C**  3014093431 Overall length: 150 mm Diameter of probe: 16 mm Connector: BNC	1. 0.02 to 19,000 mg/L F^- (10^{-6} to 1 mol/L F^-) 2. 20 mg/L (10^{-3} mol/L) F^-, pH 4 to 10 3. 0 to 50°C 4. Within 5 seconds	Possible interference when multiply-charged ion (ex. Al^{3+}, Fe^{3+}) coexisted and foamed the complex.
Nitrate ion electrode (combination) **6581-10C**  3014093432 Overall length: 150 mm Diameter of probe: 16 mm Connector: BNC	1. 0.62 to 62,000 mg/L NO_3^- (10^{-5} to 1 mol/L NO_3^-) 2. 62 mg/L (10^{-3} mol/L) NO_3^-, pH 3 to 7 3. 0 to 50°C 4. Within 15 seconds	ClO_4^- = 0.03, I^- = 0.1, Br^- = 2 NO_2^- = 3, Cl^- = 40, F^- = 200 CH_3COO^- = 300, SO_4^{2-} = over 1,000
Potassium ion electrode (combination) **6582-10C**  3014093433 Overall length: 150 mm Diameter of probe: 16 mm Connector: BNC	1. 0.04 to 39,000 mg/L K^+ (10^{-6} to 1 mol/L K^+) 2. 3.9 mg/L (10^{-4} mol/L) K^+, pH 5 to 11 3. 0 to 50°C 4. Within 15 seconds	Rb^+ = 0.4, Cs^+ = 3, NH_4^+ = 70 Li^+, Na^+, Mg^{2+}, Ca^{2+}, Sr^{2+}, Ba^{2+} = over 1,000
Calcium ion electrode (combination) **6583-10C**  3014093434 Overall length: 150 mm Diameter of probe: 16 mm Connector: BNC	1. 0.4 to 40,080 mg/L Ca^{2+} (10^{-5} to 1 mol/L Ca^{2+}) 2. 4.0 mg/L (10^{-4} mol/L) Ca^{2+}, pH 5 to 11 3. 0 to 50°C 4. Within 15 seconds	Fe^{3+} = 0.1, Fe^{2+}, Zn^{2+} = 1, Sr^{2+} = 50 Ni^{2+}, Cu^{2+} = 70, Co^{2+} = 350 Mn^{2+} = 500, Mg^{2+} = 1,000 Na^+, K^+, Ba^{2+}, NH_4^+ = over 1,000