

Ion Selective Sensors and Accessories Reference Chart

Electrode	Type	Half-Cell	Combination	Ionic Strength Adjusters (ISA) 500 mL bottle	Silver Free Reference Fill Solutions (4) 30 mL bottles	ISE Standards 1, 500 mL bottle	ISE Standards 2, 500 mL bottle	ISE Standards 3, 500 mL bottle	Other
Ammonia	gas	-	HI4101	HI4001-00	HI4001-40	HI4001-01 0.1 M	HI4001-02 100 mg/L (ppm)	HI4001-03 1000 mg/L (ppm)	HI4000-52 replacement cap HI4001-51 membrane kit HI4000-51 replacement pH internal and cap for ammonia HI4001-45 conditioning solution HI4000-47 4 and 7 pH buffers with chloride ions background HI740159 plastic tweezers
Bromide	solid	HI4002	HI4102	HI4000-00	HI7072, 1 M KNO ₃	HI4002-01, 0.1 M			HI4000-70 polishing strip
Cadmium	solid	HI4003	HI4103	HI4000-00	HI7072, 1 M KNO ₃	HI4003-01 0.1 M			HI4000-70 polishing strip
Calcium	polymer membrane	HI4004	HI4104	HI4004-00	HI7082, 3.5 M KCl	HI4004-01, 0.1 M			HI4004-51 module HI4104-51 module for combination HI4004-45 conditioning solution
Carbon Dioxide	gas	-	HI4105	HI4005-00	HI4005-40	HI4005-01, 0.1 M	HI4005-03, 1000 mg/L (ppm) CO ₂ as CaCO ₃		HI4000-54 replacement pH internal and cap for CO ₂ HI4005-53 CO ₂ membrane kit (3 pack) HI4000-47 4 and 7 pH buffers with chloride background HI4005-45 conditioning solution HI740159 plastic tweezers
Chloride	solid	HI4007	HI4107	HI4000-00	HI7072, 1 M KNO ₃	HI4007-01, 0.1 M	HI4007-02, 100 mg/L (ppm)	HI4007-03, 1000 mg/L (ppm)	HI4000-70 polishing strip
Cupric	solid	HI4008	HI4108	HI4000-00	HI7072, 1 M KNO ₃	HI4008-01, 0.1 M			HI4000-70 polishing strip
Cyanide	solid	HI4009	HI4109	HI4001-00	HI7072, 1 M KNO ₃				HI4000-70 polishing strip
Fluoride	solid	HI4010	HI4110	HI4010-00 HI4010-05 HI4010-06 HI4010-30, TISAB II, 1 ppm TISAB II, 10 ppm TISAB II	HI7075, 1 M KNO ₃ , 0.7 M KCl	HI4010-01, 0.1 M	HI4010-02, 100 mg/L (ppm)	HI4010-03, 1000 mg/L (ppm)	HI4010-11 1 ppm with TISAB II HI4010-12 2 ppm with TISAB II HI4010-10 10 ppm with TISAB II HI4110-51 module for combination HI4010-30 fluoride measurement kit
Iodide	solid	HI4011	HI4111	HI4000-00	HI7072, 1 M KNO ₃	HI4011-01, 0.1 M			HI4000-70 polishing strip
Lead/ Sulfate	solid	HI4012	HI4112	HI4012-00	HI7072, 1 M KNO ₃	HI4012-01, lead, 0.1 M HI4012-21 sulfate, 0.1 M			HI4000-70 polishing strip
Nitrate	polymer membrane	HI4013	HI4113	HI4013-00	HI7078, (NH ₄) ₂ SO ₄ 0.5M	HI4013-01, 0.1 M	HI4013-02, 100 mg/L (ppm) nitrate-nitrogen	HI4013-03, 1000 mg/L (ppm) nitrate-nitrogen	HI4013-51 module HI4013-53 module (3 pack) HI4113-51 module for combination HI4113-53 module for combination (3 pack) HI4013-06 interferent suppressant ISA
Potassium	polymer membrane	HI4014	HI4114	HI4014-00	HI7076, 1 M NaCl	HI4014-01, 0.1 M			HI4014-51 module HI4114-51 module for combination
Silver/ Sulfide	solid	HI4015	HI4115	HI4000-00 (Ag ⁺) HI4015-00 (S ²⁻)	HI7072, 1 M KNO ₃	HI4015-01, 0.1 M Ag ⁺			HI4000-70 polishing strip
Sodium	-	-	FC300	HI4016-00	HI7079, 2 M NH ₄ Cl + AgCl	HI4016-01, 0.1 M	HI4016-02, 100 mg/L (ppm)	HI4016-03, 1000 mg/L (ppm)	HI4016-10, 10 mg/L (ppm) HI4016-45 storage solution HI4016-46 conditioning solution
Reference		HI5315			HI7072, 1 M KNO ₃ HI7076, 1 M NaCl HI7078, (NH ₄) ₂ SO ₄ HI7082, 3.5 M KCl HI7075, 1.7M KNO ₃ , 0.7M KCl				

Ion Selective Electrodes

Silver/Sulfide · Sodium · Reference



Parameter	Silver/Sulfide		Sodium	Reference
Code	HI4015	HI4115	FC300B	HI5315
Type	solid-state; half-cell	solid-state; combination	glass combination	N/A
Measurement Range	1.0M to 1•10 ⁻⁶ M 107900 to 0.11ppm (Ag ⁺) 1.0M to 1•10 ⁻⁷ M 32100 to 0.003 ppm (S ²⁻)	Ag ⁺ 1.0M to 1•10 ⁻⁶ M 107900 to 0.11ppm S ²⁻ 1.0M to 1•10 ⁻⁷ M 32100 to 0.003 ppm	1M to 1•10 ⁻⁵ M 22990 to 0.23 ppm	N/A
Optimum pH Range	2 to 8 (Ag ⁺) 12 to 14 (S ²⁻)	Ag ⁺ 2 to 8 S = 12 to 14	9.75 to 14 pH	N/A
Temperature Range	0 to 80°C	0 to 80°C	0 to 80°C	0 to 85°C
Approximate Slope	+56 (Ag ⁺) / -28 (S ²⁻)	+56 Ag ⁺ / -28 S ²⁻	+57	N/A
Body O.D.	12 mm	12 mm	12 mm	12 mm
Insertion Length	120 mm	120 mm	120 mm	120 mm
Body Material	epoxy	PEI	glass	PEI
Cable	1 m coaxial	1 m coaxial	1 m coaxial	1 m coaxial
Possible Applications	used as an indicator for titrations using silver nitrate; for the determination of sulfide ions in waters, paper liquors, natural waters and soils.		water, soil, food products, soup, dairy, brines, soft drinks, beer, wine and laboratory	used to complete electrical circuit and to provide stable reference voltage for ISE half-cells
Connection	BNC	BNC	BNC	BNC