













מדריך לבחירת אלקטרודות יון סלקטיבי תוצרת Thermo Scientific Orion

Species	Cat. No.	Construction	Measurement Range	Optimum Temperature Range	Required Reference Electrode	Reference Filling Solution	Calibration Standards	Required ISA
 Ammonia (NH ₃)	9512BNWP ¹ 951201 ³	Gas sensing combination	1.0 to 5 x 10 ⁻⁷ M 17,000 to 0.01 ppm	0 - 50 °C	Included	951202	0.1 M NH ₄ Cl / 951006	951211 
Ammonium (NH ₄ ⁺)	931801 ⁸	Plastic membrane half-cell	1.0 to 5 x 10 ⁻⁷ M 17,000 to 0.01 ppm	0 - 50 °C	900200	900002 inner / 900018 outer	1000 ppm as N / 951007	--
Bromide (Br ⁻) ionplus Design	9635BNWP ¹	ionplus Sure-Flow solid state combination	1.0 to 5 x 10 ⁻⁶ M 79,900 to 0.40 ppm	0 - 80 °C	Included	900063	0.1 M NaBr / 943506	940011
Bromide (Br ⁻)	9435BN ² 9435SC ⁴	Solid state half-cell	1.0 to 5 x 10 ⁻⁶ M 79,900 to 0.40 ppm	0 - 80 °C	900200	900002 inner / 900003 outer	0.1 M NaBr / 943506	940011
Cadmium (Cd ²⁺) ionplus Design	9648BNWP ¹	ionplus Sure-Flow solid state combination	0.1 to 10 ⁻⁷ M 11,200 to 0.01 ppm	0 - 80 °C	Included	900061	Consult instruction manual	940011
Cadmium (Cd ²⁺)	9448BN ² 9448SC ⁴	Solid state half-cell	0.1 to 10 ⁻⁷ M 11,200 to 0.01 ppm	0 - 80 °C	900200	900002 inner / 900003 outer	Consult instruction manual	940011
Calcium (Ca ²⁺) ionplus Design	9720BNWP ¹	ionplus Sure-Flow plastic membrane combination	1.0 to 5 x 10 ⁻⁷ M 40,100 to 0.02 ppm	0 - 40 °C	Included	900061	0.1 M CaCl ₂ / 922006 100 ppm CaCO ₃ / 923206	932011
Calcium (Ca ²⁺)	9320BN ²	Plastic membrane half-cell	1.0 to 5 x 10 ⁻⁷ M 40,100 to 0.02 ppm	0 - 40 °C	900100	900011	0.1 M CaCl ₂ / 922006 100 ppm CaCO ₃ / 923206	932011
Carbon Dioxide (CO ₂)	9502BNWP ¹	Gas sensing combination	10 ⁻² to 10 ⁻⁴ M 440 to 4.4 ppm	0 - 50 °C	Included	950202	0.1 M NaHCO ₃ / 950206 1000 ppm as CaCO ₃ / 950207	950210
 Chloride (Cl ⁻) ionplus Design	9617BNWP ¹	ionplus Sure-Flow solid state combination	1.0 to 5 x 10 ⁻⁵ M 35,500 to 1.8 ppm	0 - 80 °C	Included	900062	0.1 M NaCl / 941706 100 ppm Cl ⁻ / 941707 1000 ppm Cl ⁻ / 941708	940011 or 941709 / CISA 
 Chloride (Cl ⁻)	9417BN ² 9417SC ⁴	Solid state half-cell	1.0 to 5 x 10 ⁻⁵ M 35,500 to 1.8 ppm	0 - 80 °C	900200	900002 inner / 900003 outer	0.1 M NaCl / 941706 100 ppm Cl ⁻ / 941707 1000 ppm Cl ⁻ / 941708	940011 or 941709 / CISA 
 Chloride (Cl ⁻)	931701 ⁸	Plastic membrane half-cell	1.0 to 5 x 10 ⁻⁵ M 35,500 to 0.18 ppm	0 - 50 °C	900200	900002 inner / 0.1 M NaCl / 941706 0.1 M KCl outer / 100 ppm Cl ⁻ / 941707 1000 ppm Cl ⁻ / 941708		None required
Chlorine (Cl ₂)	9770BNWP ¹ 9770SC ⁴	Solid state combination	3 x 10 ⁻⁴ to 10 ⁻⁷ M 20 to 0.01 ppm	0 - 50 °C	Included	None required	100 ppm as Cl ₂ / 977007	977010 / iodide reagent 977011 / acid reagent 
Cupric (Cu ²⁺) ionplus Design	9629BNWP ¹	ionplus Sure-Flow solid state combination	6350 to 6.4 x 10 ⁻⁴ ppm	0 - 80 °C	Included	900063	0.1 M Cu(NO ₃) ₂ / 942906	940011
Cupric (Cu ²⁺)	9429BN ² 9429SC ⁴	Solid state half-cell	6350 to 6.4 x 10 ⁻⁴ ppm	0 - 80 °C	900200	900002 inner / 900003 outer	0.1 M Cu(NO ₃) ₂ / 942906	940011
Cyanide (CN ⁻) ionplus Design	9606BNWP ¹	ionplus Sure-Flow solid state combination	10 ⁻² to 8 x 10 ⁻⁶ M 260 to 0.2 ppm	0 - 80 °C	Included	900062	Consult instruction manual	951011 
Cyanide (CN ⁻)	9406BN ² 9406SC ⁴	Solid state half-cell	10 ⁻² to 8 x 10 ⁻⁶ M 260 to 0.2 ppm	0 - 80 °C	900200	900002 inner / 900003 outer	Consult instruction manual	951011 
 Fluoride (F ⁻) ionplus Design	9609BNWP ¹ 960900 ³	ionplus Sure-Flow solid state combination	Saturated to 0.02 ppm	0 - 80 °C	Included	900061	0.1 M NaF / 940906 100 ppm F ⁻ / 940907 1 ppm F ⁻ w / TISAB II / 040906 2 ppm F ⁻ w / TISAB II / 040907 10 ppm F ⁻ w / TISAB II / 040908	940909 / TISAB II 940911 / TISAB III
 Fluoride (F ⁻)	9409BN ² 940900 ³ 9409SC ⁴	Solid state half-cell	Saturated to 10 ⁻⁶ M Saturated to 0.02 ppm	0 - 80 °C	900100	900001	0.1 M NaF / 940906 100 ppm F ⁻ / 940907 1 ppm F ⁻ w / TISAB II / 040906 2 ppm F ⁻ w / TISAB II / 040907 10 ppm F ⁻ w / TISAB II / 040908	940909 / TISAB II 940911 / TISAB III
Fluoroborate (BF ₄ ⁻)	9305BN ²	Plastic membrane half-cell	1.0 to 7 x 10 ⁻⁶ M 86,800 to 0.6 ppm	0 - 40 °C	900200	900002 inner / Consult instruction manual dilute ISA outer		930711

Key Information






1). BNC Waterproof connector 2). BNC connector 3). US Standard connector 4). Screw Cap connector, requires separate cable 8). Module only, requires separate 93 Series electrode handle (9300BNWP 930000, or 9300SC) All cap, diameters are 16 mm at bottom of cap. All cable lengths are 1 meter.



Compliant with EPA testing method.



Signifies a hazardous solution. See terms and conditions for important shipping information at www.thermo.com/water.

Species	Cat. No.	Construction	Measurement Range	Optimum Temperature Range	Required Reference Electrode	Reference Filling Solution	Calibration Standards	Required ISA
Iodide (I ⁻) ionplus Design	9653BNWP ¹	ionplus® Sure-Flow® solid state combination	1.0 to 5 x 10 ⁻⁶ M 127,000 to 5 x 10 ⁻³ ppm	0 - 80 °C	Included	900063	0.1 M NaI / 945306	940011
Iodide (I ⁻)	9453BN ² 9453SC ⁴	Solid state half-cell	1.0 to 5 x 10 ⁻⁶ M 127,000 to 5 x 10 ⁻³ ppm	0 - 80 °C	900200	900002 inner / 900003 outer	0.1 M NaI / 945306	940011
Lead (Pb ²⁺) ionplus Design	9682BNWP ¹	ionplus Sure-Flow solid state combination	0.1 to 10 ⁻⁶ M 20,700 to 0.2 ppm	0 - 80 °C	Included	900062	0.1 M Pb(ClO ₄) ₂ / 948206 0.1 M Na ₂ SO ₄ / 948207	Consult instruction manual
Lead (Pb ²⁺)	9482BN ² 9482SC ⁴	Solid state half-cell	0.1 to 10 ⁻⁶ M 20,700 to 0.2 ppm	0 - 80 °C	900200	900002 inner / 900003 outer	0.1 M Pb(ClO ₄) ₂ / 948206 0.1 M Na ₂ SO ₄ / 948207	Consult instruction manual
 Nitrate (NO ₃ ⁻) ionplus Design	9707BNWP ¹	ionplus Sure-Flow plastic membrane combination	1.0 to 7 x 10 ⁻⁶ M 14,000 to 0.1 ppm as N	0 - 40 °C	Included	900046	0.1 M NaNO ₃ / 920706 1000 ppm N / 920707 100 ppm N / 930707	930711 or 930710 / nitrate ISS
 Nitrate (NO ₃ ⁻)	9307BNWP ¹	Plastic membrane half-cell	1.0 to 7 to 10 ⁻⁶ M 14,000 to 0.1 ppm as N	0 - 40 °C	900200	900002 inner / 900046 or ISA outer	0.1 M NaNO ₃ / 920706 1000 ppm N / 920707 100 ppm N / 930707	930711 or 930710 / nitrate ISS
Nitrite (NO ₂ ⁻) ionplus Design	9746BNWP ¹	ionplus Sure-Flow plastic membrane combination	1.4 x 10 ⁻² to 3.6 x 10 ⁻⁶ M 100 to 0.02 ppm	0 - 40 °C	Included	900046	0.1 M NaNO ₂ / 954606	934610
Nitrite (NO ₂ ⁻)	9346BN ² 934600 ³	Plastic membrane half-cell	1.4 x 10 ⁻² to 3.6 x 10 ⁻⁶ M 100 to 0.02 ppm	0 - 40 °C	900100	900046	0.1 M NaNO ₂ / 954606	934610
Nitrogen Oxide (NO _x)	9546BN ² 954600 ³	Gas sensing combination	5 x 10 ⁻³ to 4 x 10 ⁻⁶ M 230 to 0.18 ppm	0 - 50 °C	Included	954602	0.1 M NaNO ₂ / 954606	956410 
Perchlorate (ClO ₄ ⁻)	938101 ⁸	Plastic membrane half-cell	1.0 to 7 x 10 ⁻⁶ M 99,500 to 0.7 ppm	0 - 40 °C	900200	900002 inner / dilute ISA outer	Consult instruction manual 930711	
Potassium (K ⁺) ionplus Design	9719BNWP ¹	ionplus Sure-Flow plastic membrane combination	1.0 to 10 ⁻⁶ M 39,000 to 0.04 ppm	0 - 40 °C	Included	900065	0.1 M KCl / 921906	931911
Potassium (K ⁺)	9319BN ²	Plastic membrane half-cell	1.0 to 10 ⁻⁶ M 39,000 to 0.04 ppm	0 - 40 °C	900200	900002 inner / dilute ISA outer	0.1 M KCl / 921906	931911
Silver/Sulfide (Ag ⁺ /S ₂ ⁻) ionplus Design	9616BNWP ¹	ionplus Sure-Flow solid state combination	1.0 to 10 ⁻⁷ M 0 - 80 °C 107,900 to 0.01 ppm as Ag. 32,100 to 0.003 ppm as S ₂		Included	900062 for Ag ⁺ /S ₂ ⁻ 900061 for S ₂ ⁻	Consult instruction manual 940011 for Ag. 941609 for S ₂ ⁻ 900067 for Ag.	
Silver/Sulfide (Ag ⁺ /S ₂ ⁻)	9416BN ² 9416SC ⁴	Solid state half-cell	1.0 to 10 ⁻⁷ M 0 - 80 °C 107,900 to 0.01 ppm as Ag. 32,100 to 0.003 ppm as S ₂		900200	900002 inner / 900003 outer	Consult instruction manual 940011 for Ag. 941609 for S ₂ ⁻	
Sodium (Na ⁺)	8611BNWP ¹	ROSS® Sure-Flow combination	Saturated to 10 ⁻⁶ M Saturated to 0.02 ppm	0-100 °C	Included	900010 or 900012 for low level Na.	10 ppm Na ⁺ / 941105 100 ppm Na ⁺ / 941107 1000 ppm Na ⁺ / 841108 KA Std. Kit, 1 M NaCl with ISA / 650700 0.1 M NaCl / 941706	841111 841113 / reconditioning solution
Sodium (Na ⁺)	8411BN ²	ROSS half-cell	Saturated to 10 ⁻⁶ M Saturated to 0.02 ppm	0 - 100 °C	800300 or 800500U	900010 or 900012 for low level Na.	10 ppm Na ⁺ / 941105 100 ppm Na ⁺ / 941107 1000 ppm Na ⁺ / 841108 KA Std Kit, 1 M NaCl with ISA / 650700 0.1 M NaCl / 941706	841111 841113 / reconditioning solution
Sodium (Na ⁺)	9811BN	Micro combination	Saturated to 10 ⁻⁶ M Saturated to 0.02 ppm	0 - 80 °C	Included	900004	0.1 M NaCl / 941706	841111
Surfactant	9342BN ²	Plastic membrane half-cell	Endpoint indicator	0 - 40 °C	900200	900002 inner / 810007 outer	0.5 M Hyamine titrant / 654201	654203 / sample additive
Thiocyanate (SCN ⁻)	9458BN ²	Solid state half-cell	1.0 to 5 x 10 ⁻⁶ M 58,100 to 0.29 ppm	0 - 50 °C	900200	900002 inner / 900003 outer	Consult instruction manual 940011	
Water Hardness (X ₂ ⁻)	9332BNWP ¹	Plastic membrane half-cell	1.0 to 6 x 10 ⁻⁶ M	0 - 50 °C	900100	900011	100 ppm CaCO ₃ / 923206 0.1 M CaCl ₂ / 922006	None required



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