Technical Specifications for the Thiocyanate Ion-Selective Electrode
ELIT 8229

Introduction
The Thiocyanate Ion-Selective Electrode has a solid-state poly-crystalline membrane. The electrode is designed for the detection of thiocyanate ions **(HCN^-)** in aqueous solutions and is suitable for use in both field and laboratory applications.
The Thicyanate Ion is a monovalent anion .

One mole of (SCN^-) has a mass of 58.084 grams; 1000 ppm is 0.017M
Dissolve 1.673g anhydrous potassiuim thiocyanate (KSCN) in 1 litre water.

Physical Specifications

Length of body excluding gold contact	130 mm
Length of body including gold contact	140 mm
Diameter of body	8 mm
DC resistance at 25° C	< 0.5 MOhm
Minimum feasible sample volume	5 ml

Chemical / Operational Specifications

Preconditioning / standard solution *(But see General Operating Instructions)*	Normally 1000 ppm SCN^- as KSCN
Preconditioning time	5 minutes
Optimal pH range	pH 2 to pH 12
Temperature range	0 to 80°C
Recommended ISAB	5M $NaNO_3$ (Add 2% v/v)
Recommended reference electrode	Double junction **(ELIT 002 or 003)**
Reference electrode outer filling solution	0.1M or 0.1M CH3COOLi
Electrode slope at 25° C	54 ± 5 mV/ decade
Concentration range	1 to 5,800 ppm (2x10-5 to 0.1 Molar)
Response time	< 10 seconds

(Defined as time to complete 90% of the change in potential after immersion in the new solution.)

Potential drift (*in 1000 ppm*)	< 3 mV/ day (8 hours)

(Measured at constant temperature and with ISE and Reference Electrode continually immersed)

Interference:
NB: All poly-crystalline membranes contain Silver Sulphide and thus will not give reliable readings if Ag or S ions are present in the solution.
Chloride and Iodide also have very high interference. SCN measurements will only be reliable if these ions are absent, or only present in very low concentrations relative to the SCN.

For more information, see: www.nico2000.net.