

**Operating Instructions for the ELIT 001n
Silver/Silver Chloride/Potassium Chloride (Ag/AgCl/KCl)
Single Junction Reference Electrode**

Introduction

The **ELIT 8mm** reference electrode is similar in principle to a conventional single junction reference electrode but unlike glass electrodes, the filling solution is in the form of gel rather than liquid. Thus there is very little loss of electrolyte during use and the plastic body is a sealed unit which is very robust and long-lasting and does not require any maintenance.

It will produce a stable voltage of about 200mV relative to the Standard Hydrogen Electrode.

Installation

This electrode is designed specifically for use in combination with an ELIT 8mm ion selective electrode and must be connected to the measuring system by inserting into a Dual Electrode Head (**ELIT 201**) together with a suitable ISE. This system replaces conventional Combination Electrodes.

Storage and Operation

All reference electrodes should be kept immersed in a solution with the same composition as the filling solution when not in use. Thus they are shipped and stored with the ceramic frit protected by a plastic cap containing this solution. In this case, the filling solution is 3 Molar KCl saturated with AgCl but the Ag is not essential for the storage solution and the concentration is not critical, say $\pm 10\%$. This solution can be made by dissolving about 22.35 grams KCl crystals in 100ml water.

Before use, the black cap must be carefully removed so as not to spill the solution and kept upright for replacing when the electrode is not in use. The electrode tip must then be rinsed with a jet of de-ionised water and gently dabbed dry with a lint-free laboratory tissue before use.

After use the protective cap must be topped up with solution if necessary and replaced to prevent the ceramic frit from drying out and becoming blocked.

NOTE: It is strongly recommended that the electrode is removed from the electrode head before attempting to remove or replace the cap, in order to prevent unnecessary force being applied to the joint between the electrode body and the connecting pin.

For more information about reference electrodes and Ion Selective Electrode measurements, please visit our website: www.nico2000.net.