



Scharlab S.L.

Tel. int.: +34-93-7151811

Email: scharlab@scharlab.com

CERTIFICATE OF ANALYSIS

Product: **Conductivity standard, 147 $\mu\text{S/cm}$ (25 $^{\circ}\text{C}$), KCl** Batch 17125101
PA0100 0,001 mol/l Quality release date 07/06/2016
Expiry date 4/2019

| Analysis | Batch value | Specifications |
|---------------------------------------|------------------------|----------------------------|
| conductivity (25 $^{\circ}\text{C}$) | # 150 $\mu\text{S/cm}$ | 145 - 149 $\mu\text{S/cm}$ |
| uncertainty < 1% | | |

Results marked with # are out of Specifications

Preparation

Conductivity standard solutions are prepared using gravimetrically procedures. The solution has been equilibrated with atmospheric carbon dioxide after preparation.

Composition per liter is Potassium Chloride 0,001 mol/l.

Temperature dependence of the conductivity value

The electrolytic conductivity is strongly influenced by the temperature. It is therefore necessary to refer to the table below for an accurate control of conductivity values.

| T($^{\circ}\text{C}$) | κ ($\mu\text{S/cm}$) |
|-------------------------|-------------------------------|
| 15 | 118,5 |
| 20 | 132,8 |
| 25 | 147,0 |
| 30 | 161,2 |
| 35 | 177,5 |
| 40 | 191,5 |

Traceability

The cell constant is calibrated against SRM from NIST.

SRM 3191 Aqueous Electrolytic Conductivity (100 $\mu\text{S/cm}$)

Uncertainty

It characterises the dispersion of the values that could be attributed to the mesurand. The limits of the expanded uncertainty are given at a confidence level of 95% ($k=2$).

Measurement

The standard has been measured with an electrode, whose cell constant is approx. 0,1 cm^{-1} , and a temperature sensor.

Storage and use

This conductivity standard solution is intended for use as a calibration standard for the determination of the conductivity cell constant.

Take care in avoiding air bubbles at the electrode during measurement.

If the product is stored and unopened, this solution is stable for 3 years from the date of manufacturing.

Once the bottle is opened, store tightly closed at room temperature away from acid fumes, nitrogen oxides and sulfur dioxide. Each time the bottle is opened, a portion of the solution will evaporate, which will change the conductivity.

Never introduce the electrode in the bottle for measurements.

Never pour the used solution back in the bottle.

This certificate does not release the user from their control upon receipt of the goods

You can get a copy of any of our COA from our web site: www.scharlab.com

M. Canet
Laboratory Manager