

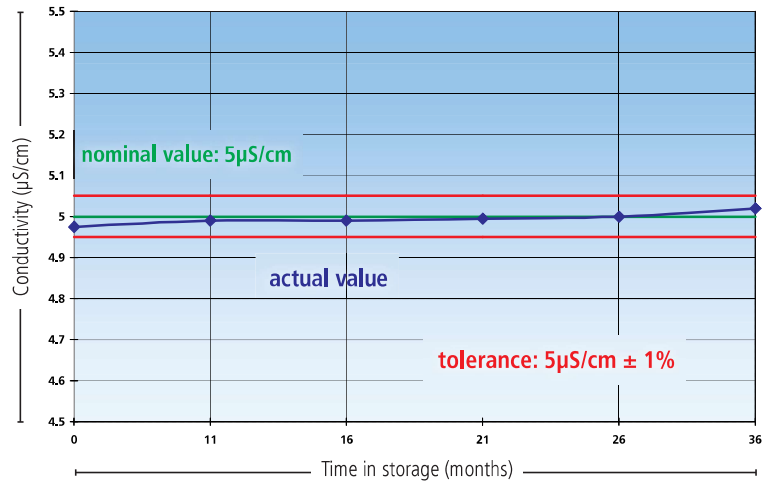
Conductivity standards

Unique advantages:

- Remains stable for a minimum of 1 year for 1.3 $\mu\text{S}/\text{cm}$, and up to 3 years for all other values
- Certificate with calibration document from DFM (available at www.hamiltoncompany.com)
- Expiration date shown on every bottle
- Bottles are permitted to stay open for a total of 60 minutes



Stability of the HAMILTON 5 $\mu\text{S}/\text{cm}$ Conductivity Standard over 36 months (Check measurement by PTB²)



<small>CIPM MRA</small>	<small>DANAK CAL Reg. no. 255</small>	<small>DFM Danish Fundamental Metrology Ltd. Mølnemarkovet 307 DK-2800 Kongens Lyngby, Denmark Phone: +45 45 93 11 44 www.dfm.dk</small>
Certificate nr. C0895 Page: 1 of 2		
Part No.: 238973/00		
PO No.: 134563000		
PPL No.: 200808130000		
Date: 2008-08-13		
Calibration certificate		
Electrolytic conductivity		
Client	Hamilton Bonaduz AG	
Address	Via Cruschi 9, CH-7402 Bonaduz, Switzerland	
Telephone/Fax	+41 81 660 6060	
Contact person	Dr. Philipp Arquint	
Date received	2008-08-11	
Identification	Conductivity standard 1,3 $\mu\text{S}/\text{cm}$	
Batch	P/N 238973, WO 1345630	
Date of calibration	2008-08-13	
Result: Conductivity standard 1,3 $\mu\text{S}/\text{cm}$, P/N 238973, WO 1345630, Sample 1		
Laboratory environmental conditions: $T = 23,0 \pm 0,5 \text{ }^\circ\text{C}$, $AH = 45 \pm 5 \%$, $\mu(\text{CO}_2)_{\text{lab}} = 380 \pm 50 \text{ ppm}$		
$T_s \text{ (}^\circ\text{C)}$	$\kappa \text{ (}T_s \text{) (} \mu\text{S}/\text{cm)}$	$U \text{ (} \mu\text{S}/\text{cm)}$
25,00	1,2971	0,0039
The reported measurement uncertainty U is given as the standard uncertainty multiplied with a coverage factor of $k = 2$, which for a normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty has been calculated in accordance with GUM:2008.		
Method and details of the measurement is given on page 2.		
The calibration is traceable to recognised national and international standards.		
The calibration has been performed under DANAK accreditation no. 255.		
Parts of the calibration certificate can only be reproduced with the written consent of DFM.		
DANAK is one of the signatories to the EA Multilateral Agreement for the mutual recognition of calibration certificates.		
This certificate is consistent with the capabilities that are included in Appendix C of the MRA drawn up by the CIPM. Under the MRA, all participating institutes recognize the validity of each other's calibration and measurement certificates for the quantities, ranges and measurement uncertainties specified in Appendix C (for details see http://www.bipm.org).		
Date: 2008-08-13		
	Pia Tannes Jakobsen Ph.D.	

Value at 25°C	Accuracy	Stability (in months)	Certificate from	Packaging unit	PN
1.3 $\mu\text{S}/\text{cm}$	$\pm 1\%$	12	DFM	Glass bottle 300 mL	238973
5 $\mu\text{S}/\text{cm}$	$\pm 1\%$	36	DFM	Glass bottle 300 mL	238926
15 $\mu\text{S}/\text{cm}$	$\pm 1\%$	36	DFM	Glass bottle 300 mL	238927
84 $\mu\text{S}/\text{cm}$	$\pm 1\%$	18	DFM	1 Calpack bottle 500 mL	238984
100 $\mu\text{S}/\text{cm}$	$\pm 1\%$	36	DFM	Glass bottle 300 mL	238934
147 $\mu\text{S}/\text{cm}$	$\pm 1\%$	18	DFM	1 Calpack bottle 500 mL	238985
1413 $\mu\text{S}/\text{cm}$	$\pm 1\%$	36	DFM	Glass bottle 300 mL	238928
1413 $\mu\text{S}/\text{cm}$	$\pm 1\%$	18	DFM	1 Calpack bottle 500 mL	238986
12880 $\mu\text{S}/\text{cm}$	$\pm 1\%$	18	DFM	1 Calpack bottle 500 mL	238988