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CERTIFICATE OF ANALYSIS

Product: **Buffer solution pH = 4,00 (20 °C)** (Potassium hydrogen phthalate)
SO1004

Batch 11758901
Test date 05/05/2011
Shelf life 5/2013

Analysis	Batch value	Guaranteed value
pH at 20 °C uncertainty $\pm 0,01$	4,000	4,00

Preparation

Standard buffer solutions are prepared using gravimetric and volumetric procedures.
Composition per litre is 10,21g Potassium hydrogen phthalate
Contains preservative

Temperature dependence of the pH value

When calibrating your pHmeter at different temperatures than 20°C, refer to the table below to introduce accurate pH values.

T (°C)	pH
0	4,00
5	4,00
10	4,00
15	4,00
20	4,00
25	4,01
30	4,02
35	4,03
40	4,04
45	4,05
50	4,06

Traceability

This pH buffer solution is traceable to Standard Reference Material from NIST
SRM 185h Potassium hydrogen phthalate,
SRM 186g Phosphate Buffers,
SRM 187e Sodium tetraborate,
SRM 189c Potassium tetroxalate and
SRM 2193a Calcium carbonate

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 batch value is determined by measurement with a combination glass electrode against five-point calibration according to DIN 19268. The use of more than five points does not yield any significant improvement in the statistical information obtainable.

Calibration standards are prepared according to DIN 19266.
Batch value certified at the time of measurement

Storage and use

For pH-meter calibration

If product is stored and unopened, this solution is stable for 2 years from the date of manufacturing.
Once the bottle is opened, store tightly closed at room temperature. Avoid exposure to light.
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 the reception control .

This certificate is an electronic copy of the certificate available in our laboratory, and does not require signature

If you need further details, please call at our factory or contact our local distributor.

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