

**Scharlab S.L.**

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CERTIFICATE OF ANALYSIS

Product	Buffer solution pH = 4,01 (20 °C) (Potassium hydrogen phthalate)	Batch	17826001
		Quality release date	22/02/2017
SO1005		Expiry date	02/2019
Analysis	Batch value	Specifications	±U
pH at 20 °C	4,019	4,005 - 4,019	0,01

Preparation

Standard buffer solutions are prepared using gravimetric and volumetric procedures.

Composition per litre is 10,3g 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	4,01
25	4,01
30	4,02
35	4,02
40	4,03
45	4,05
50	4,05

Traceability

This pH buffer solution is traceable to Standard Reference Material from NIST

SRM 185i 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.

We suggest rejecting the solution six months after opening.

Never introduce the electrode in the bottle for measurements.

Never pour the used solution back in the bottle.

This certificate does not exempt the user from checking the results upon receipt of the goods.

Any copy of our CoA may be obtained from our website at www.scharlab.comM. Canet
Laboratory
Manager