

## CERTIFICATE OF ANALYSIS<sup>®</sup>

<b>SKU</b>	<b>RLS-SOL-B75</b>
<b>CHEMICAL NAME</b>	<b>BUFFER pH 4</b>
<b>CHEMICAL GRADE</b>	<b>LABORATORY GRADE</b>
<b>CAS NUMBER</b>	<b>877-24-7</b>
<b>APPEARANCE</b>	<b>PINK SOLUTION</b>
<b>BATCH NUMBER</b>	<b>RLS-3225-2</b>
<b>EXPIRY DATE</b>	<b>3/2/2026</b>

### Warranty Certificate

<i>Test</i>	<i>Specifications</i>	<i>Results</i>	<i>Associated uncertainty, U=k·u (k=2)</i>
pH at 20 °C	3.98 – 4.01pH	4.00 pH	± 0.03 pH
DENSITY (g/mL)	1 g/mL Max	0.949 g/mL	
BOILING POINT °C		100 °C	

Informative values:	Temperature [°C]	ΔpH
Temperature dependence:	0	+ 0.05
	5	+ 0.04
	10	+ 0.02
	15	+ 0.01
	20	±0.00
	25	+ 0.01
	30	+ 0.01
	35	+ 0.01
	40	+ 0.01
	50	±0.00

#### Metrological traceability:

The pH value of this certified buffer solution is directly traceable to primary certified reference materials characterised by PTB and verified by SRMs from NIST. NIST 189x, 188x, 185x, 186 Ix, 186 IIx, 187x PTB OX-xxx/xx, TA-xxx/xx, PHT-xxx/xx, PHO-xxx/xx, BO-xxx/xx PTB:

Physikalisch Technische Bundesanstalt, Braunschweig, Germany  
NIST: National Institute of Standards and Technology, Gaithersburg, USA

#### Measurement method:

The test method was conducted in accordance with **ASTM D1293: Standard Test Methods for pH of Water for accuracy**  
pH value is measured with a combined glass electrode after 5-point calibration according to DIN 19268 with reference buffer solutions according to DIN 19266, IUPAC, NIST, Ph.Eur. and USP



RLS Chemical warrants conformance of its products against the relevant specification in good faith. In-house quality control procedures include representations provided by production/manufacturing source. A representative batch retention sample of the above-mentioned material has tested according to results above. Shelf life is based on current knowledge and holds only for correct storage in the original closed and sealed containers. Suitability of the product for a particular use or application is not guaranteed. It remains the responsibility of the user to determine such.

APPROVED DATE: 3/2/2025

**Quality Control**

**Quality Management ISO 9001:2015  
NIST traceable calibration certified.**