

CERTIFICATE OF ANALYSIS[®]

| | |
|-----------------------|------------------------------|
| SKU | RLS-SOL-B95 |
| CHEMICAL NAME | BUFFER SOLUTION pH 12 |
| CHEMICAL GRADE | LABORATORY GRADE |
| CAS NUMBER | 7601-54-9 |
| APPEARANCE | COLOURLESS SOLUTION |
| BATCH NUMBER | RLS-111024-2 |
| EXPIRY DATE | 1/10/2026 |

Warranty Certificate

| <i>Test</i> | <i>Specifications</i> | <i>Results</i> | <i>Associated uncertainty, U=k·u (k=2)</i> |
|-------------------------|-------------------------|-------------------|--|
| pH at 20 °C | 11.99 - 12.01pH | 12.00 pH | ± 0.02 |
| DENSITY (g/mL) | 1.00 - 1.04 g/mL | 1.002 g/mL | |
| BOILING POINT °C | | 100 °C | |

Informative values:

Temperature dependence1:

| Temperature [°C] | ΔpH |
|------------------|--------|
| 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:

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.



Quality Control

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

APPROVED DATE: 1/10/2024