

Certificate of Analysis

pH Buffer Standard

DIN Buffer Standard pH 4.005 ± 0.010 @ 25°C

Product No:	104005	Date of Measurement:	29/04/2025
Lot No:	425D1	Date of Sample Receipt:	29/04/2025
Expiry Date*:	28/04/2028	Date of Manufacture*:	29/04/2025

Specification:

3.995 - 4.015 @ 25°C

Mean Measured Value:

4.004 pH @ 25°C

Method:

The result reported above was determined by analysis of a sample of this lot taken at time of manufacture. Test Method used was TPPHB. Measured with a combination glass electrode after multiple point calibration with reference materials. This certificate relates solely to the sample as received by the laboratory, bearing the product code and lot number given above. The uncertainty of measurement has been calculated not to exceed ± 0.010pH at 95% confidence level, i.e. coverage factor k =2.

Buffer Substance:

Potassium Hydrogen Phthalate.

Metrological Traceability:

The test result is traceable to Standard Reference Material of National Institute of Standards and Technology (USA), SRM 185i Potassium Hydrogen Phthalate, SRM 186-I-g Potassium Dihydrogen Phosphate and SRM 186-II-g Disodium Hydrogen Phosphate.

Compliance:

This Test Method is in accordance with IUPAC Recommendations 2002 Measurement of pH. Definition, Standards and Procedures.

Accreditation:

Reagecon Diagnostics Ltd. is accredited to ISO 17025 by the American Association for Laboratory Accreditation, under scope 6739.03, for the test method, TPPHB, used to generate the above result. This accreditation deems Reagecon competent on a quality systems level and a technical level to perform the tests on the scope of accreditation. Reagecon has the Quality Management Systems in place to ensure that each individual test result generated using TPPHB is technically valid and is supported by appropriate uncertainty measurements.

Date of Issue of the Certificate :

04/06/2025

QA Officer

COONEY Rosemary

Rosemary Cooney.

All raw materials used to prepare this product are of high purity.

*The detail above is based on information supplied in writing by Reagecon Manufacturing.

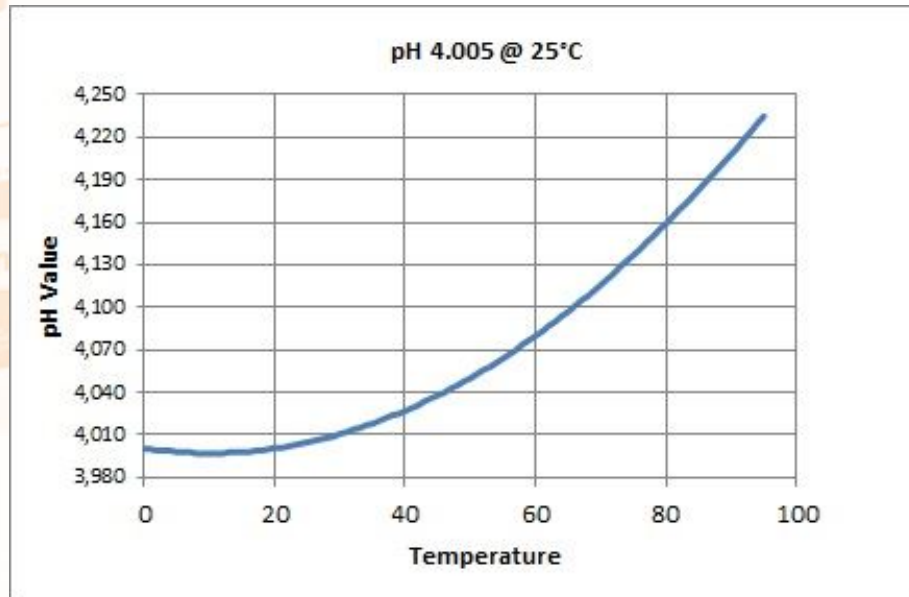
Tested by Reagecon Quality Control Laboratories for Reagecon Manufacturing

This Certificate must not be reproduced except in full. Rev-QL001

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TEMP. (°C)	pH VALUE	TEMP. (°C)	pH VALUE	TEMP. (°C)	pH VALUE
0	4,000	33	4,015	66	4,101
1	4,000	34	4,017	67	4,105
2	3,999	35	4,018	68	4,108
3	3,999	36	4,020	69	4,112
4	3,999	37	4,022	70	4,116
5	3,998	38	4,024	71	4,120
6	3,998	39	4,025	72	4,124
7	3,998	40	4,027	73	4,129
8	3,997	41	4,029	74	4,133
9	3,997	42	4,031	75	4,137
10	3,997	43	4,034	76	4,141
11	3,997	44	4,036	77	4,146
12	3,997	45	4,038	78	4,150
13	3,998	46	4,040	79	4,155
14	3,998	47	4,043	80	4,159
15	3,998	48	4,045	81	4,164
16	3,998	49	4,048	82	4,169
17	3,999	50	4,050	83	4,173
18	3,999	51	4,053	84	4,178
19	4,000	52	4,056	85	4,183
20	4,001	53	4,058	86	4,188
21	4,001	54	4,061	87	4,193
22	4,002	55	4,064	88	4,198
23	4,003	56	4,067	89	4,203
24	4,004	57	4,070	90	4,208
25	4,005	58	4,074	91	4,213
26	4,006	59	4,077	92	4,219
27	4,007	60	4,080	93	4,224
28	4,008	61	4,083	94	4,230
29	4,009	62	4,087	95	4,235
30	4,011	63	4,090		
31	4,012	64	4,094		
32	4,014	65	4,097		

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Certificate of Conformity and Traceability

pH 4.005 \pm 0.010 (k=2) - 25°C

Traceability:

Traceable to the SI Units via traceability to the NIST pH scale. Certified Reference Material SRM 185i Potassium Hydrogen Phthalate from National Institute of Standards and Technology. Nominal value pH 4.005 at 25°C. The exact value of this standard was determined with an expanded uncertainty of ± 0.0008 pH by NIST using a standard Hydrogen Electrode Apparatus.

Certified Value:

pH 4.005 \pm 0.010 (k=2) - 25°C The limits of expanded uncertainty are given to guarantee a confidence level of ~95% (k=2). This uncertainty reflects the combined effects of measurement errors, operator errors and equipment errors.

Stability:

When stored under Good Laboratory practice the certified value is valid for the extent of the products shelf life whether opened or unopened.

Measurement:

The certified value was determined by measurements of samples with dedicated electrodes under thermostated conditions using a high-resolution meter traceable to primary standards.

Composition:

Potassium Hydrogen Phthalate 50mmol/L
Added germicide < 0.01%

Formulation:

Specified by NIST, IUPAC and DIN19266.

Preparer:

Reagecon Diagnostics Ltd.

Intended Use:

Standard pH solution for calibration of pH measurement chains.

Preparation of standard:

Potassium Hydrogen Phthalate, Analar grade, was dissolved and mixed without loss in purified water. Germicide was added. The solution was protected from evaporation and contamination until bottling.

Storage:

Before use: store in unopened bottle.

After opening: store in capped bottle in normal atmospheric conditions at a temperature between 5°C and 30°C.

Recommended Use:

First use: Write the opening date on the bottle using an indelible pen or appropriate label.

Use a clean dry beaker for taking an aliquot for calibration and cap bottle as soon as aliquot is taken.

Never pour the used aliquot back into the bottle. Always follow Good Laboratory Practice.

For accurate measurements at a temperature other than 25°C, refer to the table above when calibrating your meter.