

Certificate of Analysis

pH Buffer Standard

DIN Buffer Standard pH 12.454 ± 0.050 @ 25°C

Product No:	112454	Date of Measurement:	26/06/2025
Lot No:	262725F2	Date of Sample Receipt:	26/06/2025
Expiry Date*:	25/09/2025	Date of Manufacture*:	26/06/2025

Specification:	Mean Measured Value:
12.404 - 12.504 @ 25°C	12.455 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 ± 0.020pH at 95% confidence level, i.e. coverage factor k =2.

Metrological Traceability:

The test result is traceable to Standard Reference Material of National Institute of Standards and Technology (USA), SRM 191d-I Sodium Bicarbonate, SRM 191d-II Sodium Carbonate, 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 :
26/06/2025

QC Laboratory Technician
PILI Jashil



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

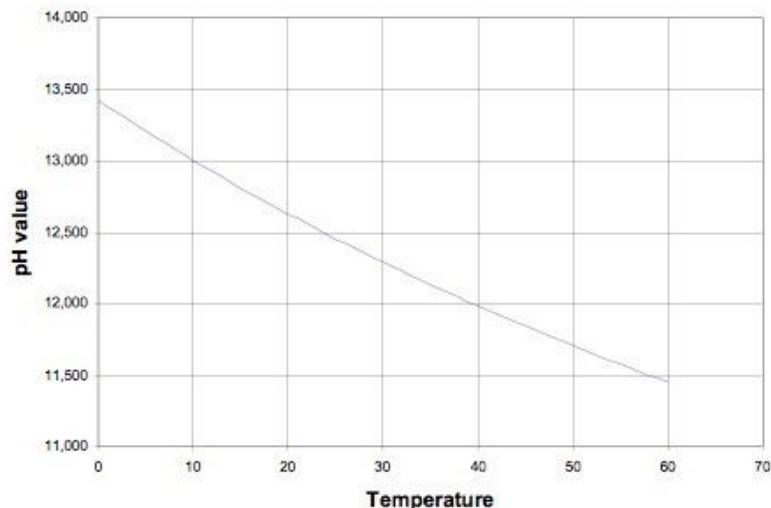
This Certificate must not be reproduced except in full. Rev-QL001

Certificate of Analysis

pH Buffer Standard

DIN Buffer Standard pH 12.454 ± 0.050 @ 25°C

pH 12.454 at 25°C



TEMP. (°C)	pH VALUE	TEMP. (°C)	pH VALUE
0	13.424	33	12.195
1	13.381	34	12.164
2	13.337	35	12.133
3	13.294	36	12.103
4	13.250	37	12.072
5	13.207	38	12.043
6	13.166	39	12.013
7	13.125	40	11.984
8	13.085	41	11.955
9	13.044	42	11.927
10	13.003	43	11.898
11	12.964	44	11.870
12	12.926	45	11.841
13	12.887	46	11.814
14	12.849	47	11.787
15	12.810	48	11.759
16	12.773	49	11.732
17	12.736	50	11.705
18	12.699	51	11.679
19	12.663	52	11.653
20	12.627	53	11.626
21	12.592	54	11.600
22	12.557	55	11.574
23	12.522	56	11.549
24	12.488	57	11.524
25	12.454	58	11.499
26	12.420	59	11.474
27	12.387	60	11.449
28	12.354		
29	12.322		
30	12.289		
31	12.258		
32	12.227		

Certificate of Analysis

pH Buffer Standard

DIN Buffer Standard pH 12.454 ± 0.050 @ 25°C

Certificate of Conformity and Traceability

pH 12.454 ±0.050 (k=2) - 25°C

Traceability:

Traceable to NIST pH scale. Certified Reference material from National Institute of Standards & Technology (NIST) - Nominal value pH 10.014 @ 25°C. The exact value of this standard was determined with an expanded uncertainty of ±0.003pH by NIST using a standard Hydrogen Electrode Apparatus.

Certified Value:

pH 12.454 ±0.050 (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:

Calcium Hydroxide saturated @25°C.

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:

Calcium Hydroxide 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.

This product is a saturated solution that can precipitate at high temperature. If precipitate is observed then refrigerate for a minimum of 2 hours, dissolve precipitate by mixing by inversion, then return to room temperature.