

Certificate of Analysis

pH Buffer Standard

Buffer Standard pH 1.675 ± 0.010 @ 20°C

Product No:	101675	Date of Measurement:	10/06/2022
Lot No:	167722F1	Date of Sample Receipt:	10/06/2022
Expiry Date*:	28/06/2024	Date of Manufacture*:	10/06/2022

Specification:	Mean Measured Value:
1.665 - 1.685 @ 20°C	1.676 pH @ 20°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 ± 0.015pH at 95% confidence level, i.e. coverage factor k =2.

Buffer Substance:

Potassium Tetraoxalate.

Metrological Traceability:

The test result is traceable to Standard Reference Material of National Institute of Standards and Technology (USA), SRM 189c Potassium Tetraoxalate and SRM 185i Potassium Hydrogen Phthalate.

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 Irish National Accreditation Board, under scope 264T, for the test method(s), TPPHB, used to generate the above result. This accreditation is intended only to certify that 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.

Cert Remark:

Supplement to certificate issued on 10/06/2022.
Change History - Updated to include pages 2 and 3.

Date of Issue of the Certificate :

28/09/2022

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

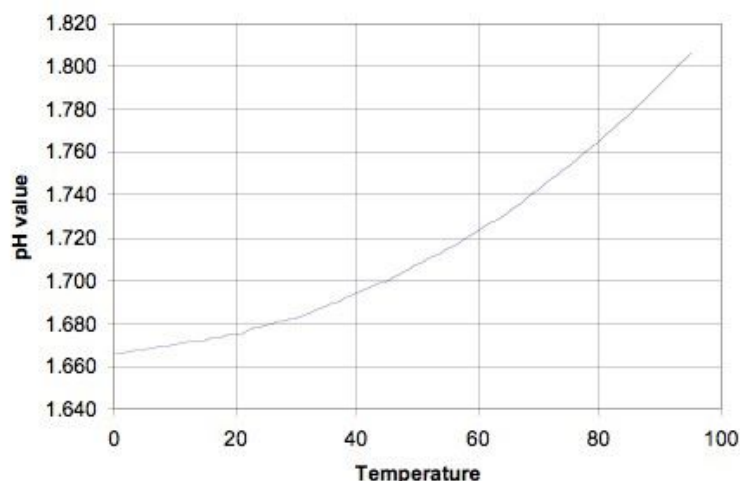
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pH 1.675 at 20°C



TEMP. (°C)	pH VALUE	TEMP. (°C)	pH VALUE	TEMP. (°C)	pH VALUE
0	1.666	33	1.686	66	1.734
1	1.666	34	1.687	67	1.736
2	1.667	35	1.688	68	1.739
3	1.667	36	1.689	69	1.741
4	1.668	37	1.690	70	1.743
5	1.668	38	1.692	71	1.745
6	1.668	39	1.693	72	1.747
7	1.669	40	1.694	73	1.750
8	1.669	41	1.695	74	1.752
9	1.670	42	1.697	75	1.754
10	1.670	43	1.698	76	1.756
11	1.671	44	1.699	77	1.758
12	1.671	45	1.700	78	1.761
13	1.672	46	1.702	79	1.763
14	1.672	47	1.703	80	1.765
15	1.672	48	1.704	81	1.768
16	1.673	49	1.706	82	1.770
17	1.673	50	1.707	83	1.773
18	1.674	51	1.709	84	1.775
19	1.675	52	1.710	85	1.778
20	1.675	53	1.712	86	1.781
21	1.675	54	1.713	87	1.783
22	1.677	55	1.715	88	1.786
23	1.678	56	1.716	89	1.789
24	1.678	57	1.718	90	1.792
25	1.679	58	1.720	91	1.795
26	1.680	59	1.722	92	1.798
27	1.681	60	1.723	93	1.800
28	1.681	61	1.725	94	1.803
29	1.682	62	1.727	95	1.806
30	1.682	63	1.728		
31	1.683	64	1.730		
32	1.685	65	1.732		

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Traceability:

Traceable to NIST pH scale. Certified Reference material from National Institute of Standards & Technology (NIST) - Nominal value pH 1.672 @ 20°C. The exact value of this standard was determined with an expanded uncertainty of ± 0.002pH by NIST using a standard Hydrogen Electrode Apparatus.

Certified Value:

pH 1.675 ± 0.010 (k=2) - 20°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 Tetraoxalate 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 Tetraoxalate, puriss p.a. , 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 20°C, refer to the table above when calibrating your meter.