Certificate of Analysis

ACCREDITED
CERT #6739.03

pH Buffer Standard

DIN Buffer Standard pH 9.180 ± 0.010 @ 25°C

Product No:	109180	Date of Measurement:	05/12/2023
Lot No:	10918023L1	Date of Sample Receipt:	05/12/2023
Expiry Date*:	28/11/2025	Date of Manufacture*:	05/12/2023

Specification:

9.170 - 9.190 @ 25°C

Mean Measured Value:

9.180 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.

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.

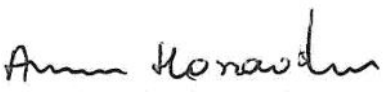
Accreditation:
Reagecon Diagnostics Ltd. is accredited by the American Association for Laboratory Accreditation, under scope 6739.03, for the test method, TPPHB, used to generate the above result. This accreditation deems Reagecon competent on a quality systems level and a technical level to perform 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 :

06/12/2023

QC Technician

HOSZOWSKA Anna



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

Reagecon Diagnostics Ltd. - Shannon Free Zone, Co, Clare, Ireland.
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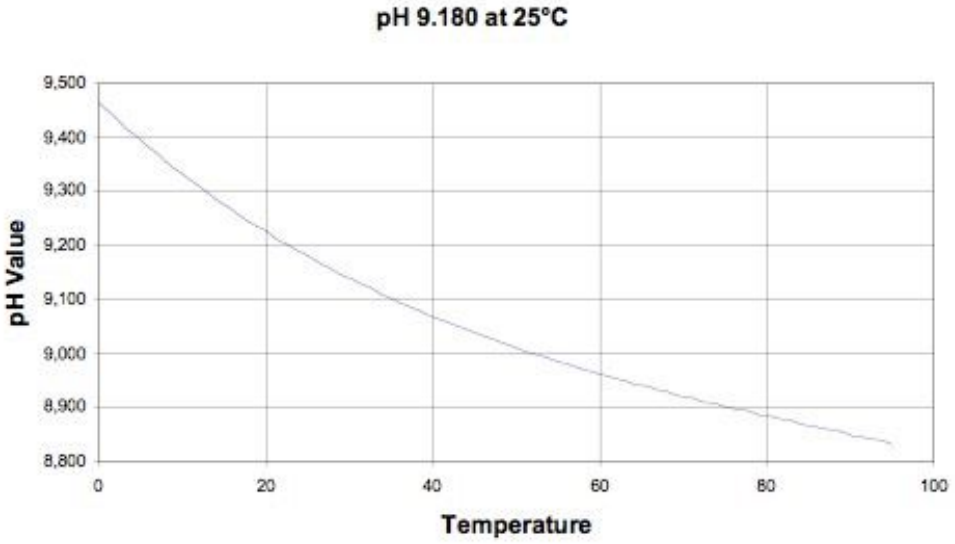

TEMP. (°C)	pH VALUE	TEMP. (°C)	pH VALUE	TEMP. (°C)	pH VALUE
0	9,464	33	9,117	66	8,937
1	9,450	34	9,109	67	8,933
2	9,436	35	9,102	68	8,929
3	9,423	36	9,095	69	8,925
4	9,409	37	9,088	70	8,921
5	9,395	38	9,081	71	8,917
6	9,382	39	9,075	72	8,913
7	9,370	40	9,068	73	8,910
8	9,357	41	9,062	74	8,906
9	9,345	42	9,056	75	8,902
10	9,332	43	9,050	76	8,898
11	9,321	44	9,044	77	8,895
12	9,310	45	9,038	78	8,891
13	9,298	46	9,032	79	8,888
14	9,287	47	9,027	80	8,884
15	9,276	48	9,021	81	8,881
16	9,266	49	9,016	82	8,877
17	9,255	50	9,010	83	8,874
18	9,245	51	9,005	84	8,870
19	9,235	52	9,000	85	8,867
20	9,225	53	8,995	86	8,864
21	9,216	54	8,990	87	8,860
22	9,207	55	8,985	88	8,857
23	9,197	56	8,980	89	8,853
24	9,189	57	8,976	90	8,850
25	9,180	58	8,971	91	8,847
26	9,171	59	8,967	92	8,843
27	9,163	60	8,962	93	8,840
28	9,155	61	8,958	94	8,836
29	9,147	62	8,954	95	8,833
30	9,139	63	8,949		
31	9,132	64	8,945		
32	9,124	65	8,941		

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Certificate of Conformity and Traceability
pH 9.180 ±0.010 (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 9.180 ±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:
Disodium Tetraborate decahydrate 10mmol/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:
Disodium Tetraborate decahydrate EP 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.

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