



CERTIFICATE OF ANALYSIS
Complies with ISO 17034, ISO Guide 31,
ISO Guide 35, and ISO 9001
TRACEABLE® CERTIFIED REFERENCE MATERIAL



This certificate indicates traceability to standards provided by (NIST) National Institute of Standards and Technology and/or a National Standards Laboratory.

1765

Certificate No. : 4888-14305814

Description : Buffer 7.000 pH Yellow

Catalog Number : 15-078-286,15558703

Lot : CC781872

Certificate Date : 13 Jul 2023

Expiration Date : 13 Jul 2025

Certified Value : 7.003 pH

U: ±0.011 pH (k=2) at 25°C

Certification measurements are performed under ISO 17034, A2LA accreditation no. 1750.02. They are traceable to recognized national and international standards via an unbroken chain of comparisons. pH is defined as the negative logarithm of the hydrogen ion activity.

MEASUREMENT: Minimum twelve (12) 100 ml samples were measured from this lot. The pH of each sample was determined using a pH meter and electrode.

UNCERTAINTY: The certified value is given as the average of the measured samples. The reported expanded uncertainty (U) is determined from the measurement variation from sample to sample, change due to shelf life, repeated use, and uncertainty of the measurement process. The value of uncertainty is multiplied by k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%. Uncertainty is calculated in accordance with the ISO "Guide to the Expression of Uncertainty in Measurement".

METHOD: The certified reference material is produced and analyzed by Control Company. The certified reference material is comprised of deionized water, 0.029 mol/kg H₂O disodium hydrogen phosphate, 0.021 mol/kg H₂O potassium dihydrogen phosphate, and germicide.
Issue Date : 13 Jul 2023

Michael Pietroniro, Technical Manager

Nicol Rodriguez, Quality Manager

Traceability: Standards and Equipment Used

Description	Serial Number	Due Date	Traceable Reference
pH/Ion Meter	658R067-N023		
pH Reference Material 7.000	E1205522	20 Mar 2025	055-22
Digital Thermometer	102008443	15 Jul 2023	4000-13511244
pH Electrode	23041-F16		

Laboratory Environment Conditions: 57.00%RH 25.1°C 1014mBar

CONTROL COMPANY 12554 Galveston RD Suite B230 Webster TX USA 77598
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Control Company is an ISO 17034:2016 Certified Reference Material (CRM) Producer Accredited by American Association for Laboratory Accreditation (A2LA Certificate No. 1750.02). This certificate fulfills the requirements of ISO Guide 31:2015 (Reference Materials – Contents of Certificates and Labels), ISO 17034:2016 "Quality System Guidelines for the Production of Reference Materials", and ISO Guide 35:2017 "Certification of Reference Materials – General and Statistical Principles". Control Company is an ISO/IEC 17025:2017 Calibration Laboratory Accredited by American Association for Laboratory Accreditation (A2LA Certificate No. 1750.01). Control Company is ISO 9001:2015 certified by DNV GL (Certificate No. CERT-01805-2006-AQ-HOU-ANAB). Traceable® is a registered trademark of Control 3 Inc.



Temperature Correction Information:

Use the chart below only for making absolute measurements. That is, measurements without any automatic temperature correction (temperature coefficient set to 0).

		Temperature Correction Chart																		
°C	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9										
18	7.027	7.027	7.026	7.026	7.025	7.025	7.025	7.024	7.024	7.024										
19	7.023	7.023	7.022	7.022	7.022	7.021	7.021	7.021	7.020	7.020										
20	7.019	7.019	7.019	7.018	7.018	7.018	7.017	7.017	7.017	7.016										
21	7.016	7.016	7.015	7.015	7.015	7.014	7.014	7.014	7.013	7.013										
22	7.012	7.012	7.012	7.011	7.011	7.011	7.010	7.010	7.010	7.010										
23	7.009	7.009	7.009	7.008	7.008	7.008	7.007	7.007	7.007	7.006										
24	7.006	7.006	7.005	7.005	7.005	7.004	7.004	7.004	7.004	7.003										
25	7.003	7.003	7.002	7.002	7.002	7.002	7.001	7.001	7.001	7.000										
26	7.000	7.000	7.000	6.999	6.999	6.999	6.998	6.998	6.998	6.998										
27	6.997	6.997	6.997	6.996	6.996	6.996	6.996	6.995	6.995	6.995										
28	6.995	6.994	6.994	6.994	6.994	6.993	6.993	6.993	6.993	6.992										

The above data are derived values based upon IUPAC data (Pure and Applied Chemistry 74, 2169-2200) and data/algorithm obtained using a temperature controlled calibration bath.

Shown on the chart is temperature (in the far left column) in whole degrees. Shown across the top row is temperature in tenths of a degree. Using a thermometer, measure the temperature of this certified reference material. Locate the measured temperature in whole numbers on the far left column. Follow across the row to the temperature in tenths of a degree. At the intersection is the certified reference material value at that specific temperature. Standardize the meter using that value.

Example: Measured temperature is 24.5°C. Find 24°C in the far left column, find the row 0.5°C. Where 24°C and 0.5°C intersect, read the value in pH.

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