

COLOUR CODED pH/ REDOX BUFFER SOLUTION, CONDUCTIVITY STANDARD & REFERENCE/ STORAGE SOLUTIONS

- * **NIST CERTIFIED**
- * **2 years Shelf Life**



A **buffer solution** (more precisely, pH buffer or hydrogen ion buffer) is an aqueous solution consisting of a mixture of a weak acid and its conjugate base, or vice versa. This allows you to adjust your testing system to precisely measure your sample's unknown pH.

Hence a traceable analysis is necessary for consistency and universal acceptance of your pH results – including acceptance by regulatory bodies.

For this an accurately and precisely made buffer is the most important thing to the success of your quality measurement ensuring:

- That Reliability of your measurement is of highest standards
- Avoids costly repeat Analysis and wastage of your expensive measurement solutions
- Acceptance & Authentication of your results

For the above, we always advise to use Traceable buffers. Accuracy of pH measurement results are directly affected by the buffer reference materials used in calibration. TOSHCON offers a selection of Buffers to match the Highest Quality and your specific requirements.

To ensure maximum precision with NIST traceability and ensure compliance in the state of art facilities where the buffers are produced, the facilities are:

- Temp and Moisture controlled.
- Maintain highest of hygiene so that it remains dust free
- Use Highest Quality multiple Calibration Meters to re-authenticate data
- Use 5 Point Calibration electrodes for testing

Benefits of using TOSHCON Buffer Solutions:

- Highest Quality measurement since there is **SRM from NIST and PTB Traceability with Certificate** to each batch of Buffers made
- Temperature dependence data is printed on the label with Batch Nos. & Expiry Dates
- No need of separate measurement chamber since the bottles are **Twin-neck bottles** with integrated calibrating chamber. These can be carried for field measurements as well.
- Special Stability formulators ensure longer stability even after bottles are opened
- Avoidance of contamination and poisoning of the main solution
- 2 year Expiry Date
- Ensures less wastage since correct quantity of buffer is dispensed into the calibrating chamber
- Don't need to write/ record "opened on this date or can be used till this date"
- Available in 500ml, 1000ml & 5000ml sizes

TOSHNIWAL INSTRUMENTS MANUFACTURING PVT. LTD.,

An ISO 9001:2015 Company

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There is a test certificate for each and every batch of buffer solutions we make and which can be downloaded and printed as per your requirement.

While the buffer can be good and traceable, however for best accuracy you need to make sure that you:

- Perform standardization with fresh buffer solutions
- Discard and never pour used buffer back into the main bottle
- Match the Temperature of your sample to Temp of the buffer
- Calibrate your system before each use or set of uses
- Get your Meter tested/ Calibrate every year

Redox Buffer Solution:

TOSHCON provides Redox buffer solutions which are used for verification of redox/ ORP sensors. Most of Redox/ ORP instruments for redox measurement are not calibrated as this is the relative measurement hence redox buffers are for verification & not for calibrating the meter.

Like other pH & conductivity solutions, Redox solution is also temperature dependent. A temperature vs mV table is provided on each twin neck bottle for your reference.

All Redox Buffer Solutions are prepared as per ASTM 1125-95 standard.

TOSHCON supplies two Redox Buffer Solutions & values are as under.

1. Redox Buffer Solution 220mV ± 25 mV
2. Redox Buffer Solution 468mV ± 25 mV

Conductivity Standard Solution:

Electrical conductivity measurement in liquid requires high performance measuring instrument and sensor. At the same time without high quality conductivity solution the measurement is not complete. TOSHCON provides the high-quality conductivity solution which can be used to complete your high-performance conductivity measurement.

All Conductivity Standard Solutions are prepared as per ASTM D1125-95 standard.

TOSHCON supplies three Conductivity Standard Solutions & values are as under.

1. Conductivity Standard Solution 1413 μ S/cm $\pm 1.5\%$
2. Conductivity Standard Solution 12.86 mS/cm $\pm 1.5\%$
3. Conductivity Standard Solution 111.8 mS/cm $\pm 1.5\%$

All TOSHCON pH / Redox Buffer Solutions, Conductivity Standard Solutions are provided with a certificate of analysis. This certificate states the nominal value of the Redox solution at 25°C. Apart from Redox value, the certificate contains Product Code, Batch No., Expiry Date & Temperature Chart.

pH Buffer Solutions

Model	pH	Accuracy
TPB1	1.68	± 0.02 at 25°C
TPB4	4.01	± 0.02 at 25°C
TPB6	6.86	± 0.02 at 25°C
TPB7	7.00	± 0.02 at 25°C
TPB9	9.18	± 0.02 at 25°C
TPB10	10.01	± 0.02 at 25°C
TPB12	12.45	± 0.02 at 25°C

Redox Buffer Solutions

Model	mV	Accuracy
TRB2	220	± 25 at 25°C
TRB4	468	± 25 at 25°C

Conductivity Standard Solutions

Model	Conductivity	Accuracy
TCS14	1413 μ S/cm	$\pm 1.5\%$ at 25°C
TCS12	12.88 mS/cm	$\pm 1.5\%$ at 25°C
TCS11	111.8 mS/cm	$\pm 1.5\%$ at 25°C

Storage Solution for pH / Redox Electrodes

Model: TSS

Refilling Electrolyte Reference Solution for pH / Redox Electrodes

Model: TRE

ORDERING CODE

T - X - X

Buffer / Standard Solutions:	Code
1.68 pH	- PB1
4.01 pH	- PB4
6.86 pH	- PB6
7.00 pH	- PB7
9.18 pH	- PB9
10.01 pH	- PB10
12.45 pH	- PB12
220 mV	- RB2
468 mV	- RB4
1413 μ S	- CS14
12.88 mS	- CS12
111.8 mS	- CS11
Storage Solution	- SS
Reference Electrolyte	- RE

Quantity of Solution:	
Qty.	Code
500 ml	-
1000 ml	- 1
5000 ml	- 5

Example:

- * For 500ml of 4.01 pH Buffer please order T-PB4
- * For 1000ml of 220 mV Redox Buffer please order T-RB2-1

For Ordering please contact:-

9351497767, analytical1@toshcon.com
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INDUSTRIES / APPLICATIONS

- Pharmaceutical
- Research
- Chemical Industries
- Educational Institutions
- Process Industry
- Water & Waste Water Industry
- PHED

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