

0.5M TCEP-HCl Solution (pH: 6.0, 7.0 and 8.0)(Catalog# TBS5082)**DESCRIPTION**

Tris(2-carboxyethyl)phosphine hydrochloride (TCEP-HCl) Solution is a high powerful, odorless, thiol-free reducing agent with broad application to protein involving reduction of disulfide bonds. The pH value of the solution is designed at 6.0, 7.0 and 8.0 for multiple choices. This product is an effective and convenient replacement for β -mercaptoethanol (β -ME) or DTT in protein analysis.

HIGHLIGHT FEATURES

- Replacement of DTT and β -ME: unlike DTT and β -ME, TCEP is odor-free, contributing to a healthier lab environment.
- **High Efficient:** 5 to 50mM TCEP thoroughly reduces most peptide or protein disulfide bonds within a few minutes.
- **Stable and versatile:** reduces peptides and proteins over a broad range of pH, salt, detergent and temperature conditions. It is resistant to air oxidation; nonvolatile and nonreactive toward other functional groups found in proteins
- **Compatible:** removal of this reagent is not necessary before most applications, (e.g. histidine-tagged protein purification, maleimide conjugations), because TCEP does not contain sulfhydryl groups.

DIRECTIONS FOR USE

TCEP breaks disulfide bonds, and can be used for a wide variety of protein applications including SDS-PAGE, mass spectrometry, labeling with cysteine specific tags, and modification of cysteine containing compounds. Its ability to prevent oxidation of protein samples makes it a useful buffer component because it helps to preserve enzymatic activity.

STORAGE

The product, as supplied, is stable for at least two years at 2- 8°C, and shipped ambient.

CONTENTS

The product is supplied as 0.5M solution at pH 6.0, 7.0 and 8.0.

The customized pH value of TCEP solution can be provided as well.

SIZE:

TBS5082-10: 10 ML

TBS5082-50: 50 ML

RELATED PRODUCTS

8M Urea (TBS5037)

4M Ammonium Sulfate Solution (TBS5038)

1M DTT (TBS5039)

1M MOPS (TBS5041)

1M Bicine Buffer (TBS5042)

1M Sodium Citrate Solution (TBS5043)

5% Bovine Serum Albumin in TBST Buffer (TBS5049)

REFERENCE

1. Burns, J.A. et al. Selective reductgion of disulfides by tris(2-caroxyethyl) phosphine, J. Org. Chem.; 1991, 56: 2648-2650.
2. Getz, E. B., et al. A comparison between the sulfhydryl reductants tris (2-carboxyethyl) phosphine, and dithiotreitol for use in protein biochemistry. Anal. Biochem. ; 1999, 273: 73-80.

This product is for *in vitro* research use only and is not intended for use in humans or animals.

This product is not intended for use as a therapeutic or in diagnostic procedures.