

TCEP Solution (1M)

Cat. # P1021-10, P1021-100

Also Known as:	Tris (2-Carboxyethyl) phosphine Hydrochloride
Formula:	$C_9H_{15}O_6P \cdot HCl$
MW:	286.65
CAS No.:	51805-45-9
Source:	Synthetic
Form:	Liquid
Purity:	>99% based on HPLC analysis of TCEP powder
Description:	TCEP (tris(2-carboxyethyl)phosphine) is a strong reducing agent. Compared to dithiothreitol (DTT) and β -mercaptoethanol, TCEP has the advantages of being odorless, a more powerful reducing agent, an irreversible reducing agent, more hydrophilic, and more resistant to oxidation in air. It is soluble in water and stable at neutral pH. It does not reduce metals used in immobilized metal affinity chromatography such as Ni-NTA resin. TCEP is particularly useful when labeling cysteine residues with maleimides.
Storage:	Store at $-20^{\circ}C$ for long-term storage, $4^{\circ}C$ up to 8 weeks, room temperature up to 2 weeks.
Application:	For most applications, 5 to 50 mM TCEP provides sufficient molar excess to effectively reduce peptide or protein disulfide bonds.
Note:	1M TCEP solution was prepared in milliQ water, neutralized to $\sim pH 7.0$ using NaOH, and filtered through 0.22 micron membrane.

