How to Make a 0.5M TCEP Stock Solution

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Abstract

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Guidelines

TCEP can be dissolved in many types of aqueous buffers, and at a wide range of pH levels and still maintain stability

This allows you to prepare TCEP working concentrations and 10X stock solutions in the buffer of your choice before use.While TCEP can be used in Phosphate buffers, it has the tendency to be unstable around neutral pH levels.

If the TCEP is needed in the buffer, prepare it immediately before use.

A 50 mM TCEP solution may be substituted for DTT or β-Mercaptoethanol (β-ME) in SDS-PAGE loading buffers. TCEP cannot be used for isoelectric focusing, due to its charge in solution.

Materials

TCEP HCl SV-TCEP by P212121

Protocol

Step 1.
Weigh 5.73 g of TCEP

REAGENTS
TCEP HCl SV-TCEP by P212121

Step 2.
Add 35 ml of cold molecular biology grade water to the vial, and dissolve the TCEP. This resulting solution is very acidic, with an approximate pH of 2.5.

REAGENTS
TCEP HCl SV-TCEP by P212121
DURATION

00:03:00

Step 3.

Bring the solution to pH 7.0 with 10 N NaOH or 10 N KOH.

Step 4.

Bring the resulting solution to 40 ml with molecular biology grade water.

Step 5.

Aliquot into 1 ml volumes in freezer tubes and store at -20°C.