

TCEP



Reducing Agent TCEP

740395.107

Protein Solving Buffer Set PSB/
TCEP

740941

Dear valued customer,

Thank you for choosing MACHEREY-NAGEL for your application.

This product is for research use only.

Important information regarding product components, specifications, safety instructions, and processing protocols, can all be found on the product website and accessed easily via the QR code.

[QR-Code product website](#)



[qr.mn-net.com/qr/\(241\)740395](http://qr.mn-net.com/qr/(241)740395)

Product description

The Reducing Agent TCEP (Tris(2-carboxyethyl) phosphine hydrochloride) is an odorless alternative to β -mercaptoethanol and dithiothreitol commonly used in molecular biology for the reduction of disulfide bonds in protein.

TCEP is a trialkyl phosphine, which are potent reductants for disulfides and are essentially unreactive toward other functional groups commonly found in proteins.

After reconstitution of MACHEREY-NAGEL TCEP, the solution can be used as odorless alternative to β -mercaptoethanol and dithiothreitol in molecular biology applications for the reduction of disulfide bonds in protein.

PSB-TCEP solution can be used as an odorless substitute for commonly known Laemmli buffer for dissolving of protein pellets for subsequent SDS-PAGE analysis for protein quantification with the MACHEREY-NAGEL Protein Quantification Assay (REF 740967.50).

TCEP specifications

107 mg TCEP – pH adjusted to approximately 6.8 with HCl.

Dried material.

Storage conditions and preparation of working solutions

The unopened products can be stored at room temperature (15–25 °C) and are stable until: see package label.

Reducing Agent TCEP (REF 740395.107): **Add 750 μ L of RNase-free H₂O** to the TCEP vial and incubate for several minutes at room temperature. Mix the vial to completely dissolve in order to obtain a 500 mM TCEP solution.

After reconstitution, the TCEP solution should be stored at -20 °C and is stable for at least six months.

Protein Solving Buffer Set PSB/TCEP (REF 740941): Transfer **7.5 mL PSB** from one vial to the vial of the Reducing Agent TCEP. Mix gently to avoid excessive foaming until the reducing agent is dissolved completely (this process will require several minutes). Protein Solving Buffer containing Reducing Agent TCEP: (50 mM) (PSB-TCEP) is stable for several days at room temperature and several months at 4 °C. For long term storage of PSB-TCEP, keep at -20 °C.

Note: If PSB-TCEP is turbid, warm up PSB-TCEP to > 25 °C before use until solution is completely clear (i.e., all precipitate is dissolved completely).

Protocol

Reducing Agent TCEP (REF 740395.107): Dissolve the 107 mg TCEP in 750 μ L water to obtain a 500 mM solution

of approximately pH 6.8. Dissolving the material in water might take several minutes – mix several times.

A final concentration of 10–20 mM TCEP in common lysis buffers for RNA isolation (e.g. lysis buffers as in NucleoSpin® and NucleoMag® RNA isolation kits) is recommended.

For example, add 14 µL of 500 mM TCEP to 350 µL lysis buffer of NucleoSpin® RNA kits in order to obtain approximately 20 mM TCEP within the lysis buffer.

Protein Solving Buffer Set PSB/TCEP (REF 740941): Please refer to the relating NucleoSpin® kit's user manual (e.g., NucleoSpin® TriPrep, NucleoSpin® RNA/Protein, NucleoSpin® miRNA) for more detailed information.

Safety instructions

When working with this product, wear suitable protective clothing (e.g., lab coat, disposable gloves, and protective goggles).

QR-Code Safety Data Sheet

Please find a digital version of the safety data sheets by following the link below:



www.mn-net.com/sds

Product use restriction / warranty

All MACHEREY-NAGEL products are designed for their intended use only. They are not intended to be used for any other purpose. The description of the intended use of the products can be found in the original MACHEREY-NAGEL product leaflets. Before using our products, please observe the instructions for use and the safety instructions from the respective Material Safety Data Sheet of the product.

This MACHEREY-NAGEL product is carrying documentation stating specifications and other technical information. MACHEREY-NAGEL warrants to meet the stated specifications. The provided warranty is limited to the data specifications and descriptions as given in the original MACHEREY-NAGEL literature. No other statements or representations, written or oral, by MACHEREY-NAGEL's employees, agents or representatives, except written statements signed by a duly authorized officer of MACHEREY-NAGEL are authorized. They should not be relied upon by the customer and are not a part of a contract of sale or of this warranty.

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Products and their application are subject to change. Therefore, please contact our Technical Service Team for the latest information on MACHEREY-NAGEL products. You may also contact your local distributor for general scientific information. Descriptions in MACHEREY-NAGEL literature are provided for informational purposes only.

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