

10X TA Buffer Enzyme Storage Buffer

Cat. Nos. TA6115 and TA6160

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1. Introduction

TA Buffer is an acetate-based buffer for use with a wide variety of DNA restriction and modification enzymes.^{1,2} Use of TA Buffer in reaction mixes allows sequential DNA manipulation without buffer exchange (i.e., restriction digestion, followed by dephosphorylation, followed by ligation). The solution is available as a 10X stock in 1.5-ml and 6.0-ml sizes.

2. Product Specifications

Storage: Store only at -20°C in a freezer without a defrost cycle.

10X TA Buffer: is 330 mM Tris-acetate (pH 7.5), 660 mM potassium acetate, 100 mM magnesium acetate, and 5 mM dithiothreitol (DTT).

3. Related Products

The following products are active in TA Buffer and are also available:

- T4 DNA Ligase
- T4 RNA Ligase
- T4 Polynucleotide Kinase
- T4 DNA Polymerase
- T7 DNA Polymerase
- Plasmid-Safe™ ATP-Dependent DNase
- RNase-Free DNase I
- Exonuclease I
- Exonuclease III
- Lambda Terminase
- HK™ Thermolabile Phosphatase
- HK™-UNG Thermolabile Uracil N-Glycosylase
- APex™ Heat-Labile Alkaline Phosphatase
- RecBCD Nuclease
- Q-Beta Replicase

Enzyme Storage Buffer, for dilution of enzymes supplied in this buffer, is liquid at -20°C , but is frozen at -80°C . Most highly-purified enzymes are stable under either of these conditions, but should not be stored at intermediate temperatures between about -30°C to -40°C because the storage buffer can freeze and thaw, potentially inactivating the enzyme. Some enzymes require storage buffers with cofactors or other components. Confirm that Enzyme Storage Buffer is suitable for the enzyme. Some enzymes are less stable at very dilute concentrations or you may see losses in activity due to binding of the enzyme to the walls of the tube. When you dilute an enzyme, use extreme care to assure that all tubes, pipette tips, pipettors, etc. are sterile and free of nuclease contamination. If you anticipate that you will need a different concentration of one of our enzymes on a regular basis, contact one of our Technical Consultants to ask if we could supply that concentration.

4. Product Specifications

Storage: Store only at -20°C in a freezer without a defrost cycle.

Enzyme Storage Buffer: 50% glycerol containing 50 mM Tris-HCl (pH 7.5), 0.1 M NaCl, 0.1 mM EDTA, 1 mM DTT, and 0.1% Triton[®] X-100.

Contaminating Activity Assay: Enzyme Storage Buffer is free of detectable exo- and endonuclease and RNase activities.

5. References

1. O'Farrell, P.H. *et al.*, (1980) *Molec. Gen. Genet.* **179**, 421.
2. 1996 *Epicentre Forum* **3** (2), 5.

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