TBE(Tris-Borate-EDTA) Buffer

Poduct	Con.	Cat#	Size
TBE (Tris-Borate-EDTA) Buffer	10X	IBS-BT004	1 L
	10X	IBS-BT004-1	5 L
	5X	IBS-BT003	1 L
	5X	IBS-BT003-1	5 L
	5X	IBS-BT003a	10 L

Components : 1X TBE Buffer Tris 890mM, Boric Acid 890mM, EDTA, pH 8.0 20 mM

Storage Conditions : Room Temperature

Introduction :

TBE or Tris / Borate / EDTA, is a buffer solution containing a mixture of Tris base, boric acid and EDTA. In molecular biology, TBE and TAE buffers are often used in procedures involving nucleic acids, the most common being electrophoresis. Tris-acid solutions are effective buffers for slightly basic conditions, which keep DNA deprotonated and soluble in water. EDTA is a chelator of divalent cations, particularly of magnesium (Mg^{2+}). As these ions are necessary co-factors for many enzymes, including contaminant nucleases, the role of the EDTA is to protect the nucleic acids against enzymatic degradation. But since Mg^{2+} is also a co-factor for many useful DNA-modifying enzymes such as restriction enzymes and DNA polymerases, its concentration in TBE or TAE buffers is generally kept low (typically at around 1 mM).

Tris-borate-EDTA (TBE) buffer is often used for agarose gel electrophoresis in the analysis of DNA products resulting from PCR amplification, DNA purification protocols, or DNA cloning experiments. It is particularly useful for separation of smaller DNA fragments (MW < 1000), for example small products of restriction enzyme digests. TBE has a greater buffering capacity and will give sharper resolution than TAE buffer. TBE is generally more expensive than TAE, and inhibits DNA ligase which may cause problems if subsequent DNA purification and ligation steps are intended.

Prepare a Working Solution of TBE Buffer

TBE can be diluted to 1X prior to use in electrophoresis, 0.5X is acceptable as well.

Related Produts

BT002 50X TAE
BT002a 25X TAE
BT002-1 1X TAE