

10X TBE

<u>Product Name</u>	<u>Product Code</u>	<u>Kit Packing</u>
10X TBE	ML011-100 ML	100 ml
	ML011- 500 ML	500 ml
	ML011-2X500 ML	2X500 ml

Introduction: TBE (Tris-Borate-EDTA) is an extensively used buffer for agarose gel electrophoresis applications requiring high resolution and separation of high molecular weight, double-stranded DNA. It is used for gel electrophoresis after dilution to working concentration.

Description: 10X TBE is widely used in DNA and RNA agarose gel electrophoresis and polyacrylamide gel electrophoresis. It has a higher buffering capacity than TAE buffer and for this reason TBE is preferred over TAE during DNA synthesis. TBE buffer maintains the structural integrity of nucleic acids and more suitable for their size analysis. TBE has a greater buffering capacity and will give sharper resolution than TAE buffer. In general, TBE buffer offers better resolution of 0.1 to 3 kb fragments; whereas, TAE (Tris-Acetate-EDTA) buffer provides better resolution of fragments greater than 4 kb. Furthermore, TBE is better suited for high-voltage (>150V) electrophoresis because of its higher buffering capacity and lower conductivity than TAE.

Application: Tris-Borate-EDTA (TBE) buffer is used primarily in gel electrophoresis of nucleic acids after diluting it to 1X. It is the most commonly used buffer for DNA agarose gel electrophoresis but is also used for non-denaturing RNA agarose gel electrophoresis.

Composition: 10X TBE Buffer is a sterile-filtered solution of 890 mM Tris, 890 mM borate and 20 mM EDTA. Dilution of the concentrated TBE buffer produces a 1X TBE buffer with 89 mM Tris-borate and 1 mM EDTA. The 1X buffer is used both for agarose gel and as a running buffer.

Properties:

Appearance	: Colorless solution
Clarity	: Clear and free of particles
DNase & RNase	: None detected
Bioburden	: None detected
Agarose gel electrophoresis	: As per specific standards
Suitability test	: This solution has been tested and is suitable for use

Storage conditions: 10X TBE can be stored at room temperature (15-25° C). Sometimes a white precipitate can be seen upon storage at lower temperature due to the high borate concentration. This precipitate is dissolved when the buffer is kept at 55 – 60 deg C.

Technical Assistance

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