



**Cyrusbioscience**

## TBE Buffer 5X

**Product No.:** 2002-5

**Synonym:** Tris-Borate-EDTA buffer 5X

### 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:

Components	Weight / 1 liter	Molarity
Tris base	54g	0.445M
boric acid	27.5ml	0.445M
0.5M EDTA (pH8.0)	20ml	10mM

**Storage:** Store at Room Temperature.