

**P R O D U C T   I N S E R T*****5X Tris-Borate-EDTA (5X TBE)******Buffer with Ethidium Bromide******Catalogue # 5XTBE100******For General Laboratory Use.*****STORE REAGENTS AT TEMPERATURE INDICATED ON PACKAGE. USE BEFORE EXPIRATION DATE.****INTENDED USE**

This 5X TBE buffer with ethidium bromide (EB) is a gel buffer and electrophoresis running buffer for the separation of double stranded DNA on agarose and polyacrylamide gels.

**PRINCIPLE**

Hind III fragments of  $\lambda$  DNA are resolved properly on a 1% agarose gel using TBE at working concentrations of 0.5X and 1X for the electrophoresis running and gel buffers.

**SUMMARY AND EXPLANATION**

For agarose gel electrophoresis, 5X TBE should be diluted to a working concentration of either 1X or 0.5X.<sup>1</sup> After several electrophoresis runs, the TBE buffer should be replaced. This is due to the anode solution becoming alkaline and the cathode solution acidic. This results in lowered DNA mobility.

For polyacrylamide gel electrophoresis: It is recommended that a working concentration of 1X TBE be used to provide adequate buffering capacity.<sup>1</sup>

**PRECAUTIONS****DIRECTIONS FOR USE:**

Dilute, in this container, 5X stock with 400 ml of distilled H<sub>2</sub>O or deionized H<sub>2</sub>O prior to use. This product is light sensitive.

EB is a known carcinogen. Handle with appropriate caution. Flush spill areas with water spray. Can be harmful if absorbed through skin. Avoid splashing eyes or on skin or clothing. Keep tightly sealed. Wash thoroughly after handling.

**COMPOSITION**

The 5X TBE buffer is composed of 0.45 M Tris Borate, 0.01 M EDTA, pH 8.3. This buffer contains 2.5  $\mu$ g Ethidium Bromide per ml.

**STORAGE CONDITIONS**

Store at room temperature (20 - 25°C). Use by expiration date on bottle. If a significant precipitate forms, the solution should be discarded.

**REFERENCE**

1. Sambrook, J, Fritsch, EF, Maniatis, T. *Molecular cloning: a laboratory manual*. 2nd ed. Cold Spring Harbor Laboratory Press. Cold Spring Harbor, NY, p. 6.7.