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ProductInformation

TRIS Acetate-EDTA buffer

Product Number **T 8280**
Store at Room Temperature

Product Description

Synonym: TAE buffer

This product is a powder blend, packaged in plastic bottles, that produces a 10x concentrate of TAE (0.4 M Tris acetate, 10 mM EDTA, pH 8.3), when dissolved with the indicated amount of water.

This product is suitable for gel electrophoresis after dilution to the working concentration. This product has been analyzed for the absence of nucleases.

Tris-Acetate-EDTA (TAE) running buffer is a commonly used buffer for DNA agarose gel electrophoresis, and is especially useful in preparative work.[1] Compared to Tris-Borate-EDTA (TBE) and Tris-Phosphate-EDTA (TPE) buffers, double-stranded DNA tends to run faster in TAE. However, because TAE has the lowest buffering capacity of the three buffers, the buffering capacity can become exhausted during extended electrophoresis. Buffer circulation or replacement can remedy this situation.

The 1x TAE buffer is used both in the agarose gel and as a running buffer. Applied voltages of < 5 V/cm (the distance between the electrodes of the unit) are recommended for maximum resolution.[2] TAE buffer has been utilized in agarose gel electrophoresis of RNA.[3,4] A study of free DNA solution mobility in TAE at various buffer concentrations, in the presence and absence of added NaCl, has been reported.[5] The use of TAE buffer in a denaturing gradient gel electrophoresis method for broad-range mutation analysis has been described.[6]

Precautions and Disclaimer

For Laboratory Use Only. Not for drug, household or other uses.

References

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4. Masters, D. B., et al., High sensitivity quantification of RNA from gels and autoradiograms with affordable optical scanning. Biotechniques, **12(6)**, 902-906, 908-911 (1992).
5. Stellwagen, E., and Stellwagen, N. C., The free solution mobility of DNA in Tris-acetate-EDTA buffers of different concentrations, with and without added NaCl. Electrophoresis, **23(12)**, 1935-1941 (2002).
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