BIO BASIC
Quality-Affordable Research

Product information

QF 24 V4
V1 Sept 2024

TAE Buffer premix powder

Catalog #: TB8898
Size: 1PK (25L)
Storage: 18~25°

Product Description:

This product is a powder blend, packaged in plastic bottles, that produces a 25x concentrate of TAE, 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. 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. TAE buffer has been utilized in agarose gel electrophoresis of RNA. A study of free DNA solution mobility in TAE at various buffer concentrations, in the presence and absence of added NaCl, has been reported. The use of TAE buffer in a denaturing gradient gel electrophoresis method for broad-range mutation analysis has been described.

Components:

(1PK—Total weight 160.51G of TAE Premixed powder):
Tris: 60.6G (0.5M)
Tris Acetate: 90.6G (0.5M)
EDTA disodium salt dihydrates: 9.31G (0.025M)

Disclaimers and Precautions:

For Laboratory Use Only. Not for drug, household or other uses.
1Pack of TAE Premixed powder for 1L of 25X TAE buffer.

References:

1. Ogden, R. C., and Adams, D. A., Electrophoresis in agarose and acrylamide gels. Methods Enzymol., 152, 61-87 (1987).
2. Molecular Cloning: A Laboratory Manual, 3rd ed., Sambrook, J. and Russell, D. W., CSHL Press (Cold Spring Harbor, NY: 2001), pp. 5.8, 5.76, A1.16.
3. Loening, U. E., The fractionation of highmolecular-weight ribonucleic acid by polyacrylamide-gel electrophoresis. Biochem. J.,102, 251-257 (1967).
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). .
6. Hayes, V. M., et al., Improvements in gel composition and electrophoretic conditions for broad-range mutation analysis by denaturing gradient gel electrophoresis. Nucleic Acids Res., 27(20), e29 (1999)

MUST USE ENTIRE CONTENTS FROM THE CONTAINER PER PREPARATION. The powders are mixed however not blended.