The Liu Laboratory protocol — DNA/RNA buffers
Arts & Sci Washington University in St. Louis

Commonly used buffers for DNA/RNA

TAE Buffer 50x Stock Recipe

- 242 g tris base in double-distilled H_2O
- 57.1 ml glacial acetic acid
- 100 ml 0.5 M EDTA solution (pH 8.0)

Adjust volume to 1 L.

10x TAE Recipe

For 1L of 10x solution,

- 48.5 g tris
- 11.4 mL glacial acetic acid
- 20 mL 0.5M EDTA (pH 8.0)

1x TAE Recipe

Dilute 1:10

- 0.4 M tris acetate (pH approximately 8.3)
- 0.01 M EDTA

using ultrapure water.

TBE Buffer 10x Stock Recipe

- 108 g tris base
- 55 g boric acid
- 900 ml double-distilled H_2O
- 40 ml 0.5 M EDTA solution (pH 8.0)

Adjust volume to 1 L.

1x TBE Preparation

Dilute 10x concentrated TBE buffer 10-fold with ultrapure water.

The final solution should contain:

- 0.13 M tris (pH 7.6)
- 45 mM boric acid
- 2.5 mM EDTA

Buffer Prep Tips

- If precipitation is present, warm to 37 °C and mix until completely dissolved prior to dilution.
- It is recommended 1x working solutions be filtered through a 0.2 mm filter before use.

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- 1x working solutions can be used until the expiration date on packaging with storage at room temperature. Discard if buffer becomes cloudy or discolored.