

SOP: R014

Preparation of TAE Buffer

Materials and Reagents: (per Liter of 50X solution)

1. Milli-Q Water
2. Tris-base, 242 g
3. Glacial acetic acid, 57.1 ml
4. 0.5M EDTA, 100 ml (note 1)
5. 1L graduated cylinder
6. 2L pyrex beaker
7. 1L glass bottle
8. Magnetic stir bar
9. Magnetic stir plate

Protocol:

1. ____ Measure 600 ml of Milli-Q water using the graduated cylinder and pour into pyrex beaker.
2. ____ Add stirbar, place on stirplate, and begin stirring.
3. ____ Add 242 g tris, 57.1 ml acetic acid, and 100 ml 0.5M EDTA.
4. ____ Allow to stir until the tris goes into solution.
5. ____ Adjust the pH to 8.0 if needed.
6. ____ Bring the volume to 1L.
7. ____ Transfer to a clean glass bottle.
8. ____ Store at room temperature.
9. ____ Dilute to 1X before use (2ml 50X TAE per 98ml water).

Notes:

1. 0.5M EDTA is made as follows:
 - Add 93 g Disodium Ethylenediamine Tetraacetate ($\text{diNaEDTA} \cdot 2\text{H}_2\text{O}$) to 400 ml water
 - Stir for 1 hour
 - Adjust pH to 8.0
 - Bring the volume to 500 ml
 - Stir for an additional hour
 - Check pH again and adjust if necessary
 - Store at 4°C