

EDTA Solution 0.5M #1034-5sachets

Ethylenediaminetetraacetic acid (EDTA) is used as a ligand and chelating agent. It's especially useful for sequestering calcium (Ca^{2+}) and iron (Fe^{3+}) metal ions. This is the lab recipe for 0.5 M EDTA solution at pH 8.0:

EDTA Solution Materials

- 186.1 grams EDTA #1034 (disodium ethylenediamine tetraacetate•2H₂O)
- 800 milliliters distilled water #9991 (steril)
- sodium hydroxide (#2020 NaOH) solution or solid (to adjust pH)

Procedure

1. Stir 186.1g disodium ethylenediamine tetraacetate•2H₂O into 800 ml of distilled water.
1. Stir the solution vigorously using a magnetic stirrer.
2. Add NaOH solution to adjust the pH to 8.0. If you use solid NaOH pellets, you'll need about 18-20 grams of NaOH. Add the last of the NaOH slowly so that you don't overshoot the pH. You may wish to switch from solid NaOH to a solution toward the end, for more precise control. The EDTA will slowly go into solution as the pH of the solution nears 8.0.
3. Dilute the solution to 1 L with distilled water.
4. Filter the solution through a 0.5 micron filter.
5. Dispense into containers as needed and sterilize in an autoclave.

