DEPC (Diethyl pyrocarbonate)

For research use only

Cat No : YT9079
Size : 5 ml
Store at 2 – 8 ◦c

How to make DEPC-treated water :

To make DEPC (Diethyl Pyrocarbonate)-treated water, which is used to create RNase-free water for RNA work, follow these steps:

Materials Needed:

- DEPC (Diethyl Pyrocarbonate)
- Distilled water (dH2O)
- Glass container
- Magnetic stirrer or orbital shaker
- Autoclave

Procedure:

1. **Preparation**:
   - Add **1 mL of DEPC** to **1 L of distilled water** in a glass container for a final concentration of 0.1% DEPC
   - Mix well to ensure proper dispersion of DEPC in the water.
2. **Incubation**:
   - Allow the mixture to react at **room temperature for at least 1 hour** or at **37°C for 12 hours**.
   - Stir the solution using a magnetic stirrer or orbital shaker to ensure thorough mixing.
3. **Autoclaving**:
   - Autoclave the DEPC-treated water at **15 psi** for15-45 minutes (**20 minutes is recommended)** to inactivate any remaining DEPC.
   - Allow the solution to cool to room temperature after autoclaving.
4. **Storage**:
   - Store the DEPC-treated water at room temperature in a clean, aseptic container.
   - Label the container clearly to avoid confusion with untreated water.

Safety Note:

- DEPC is a strong RNase inhibitor but can be harmful if inhaled or ingested. Always handle it with care, use appropriate personal protective equipment (PPE), and work in a well-ventilated area.

Applications of DEPC-Treated Water

1. **RNA Isolation**
2. **cDNA Synthesis**
3. **PCR and qPCR**
4. **RNA Sequencing (RNA-Seq)**
5. **In Vitro Transcription**
6. **Northern Blotting**
7. **RNA Stability Studies**