



Centrifuge Tubes Instructions

I. Product Application

Centrifuge tubes are laboratory vessels designed to hold liquid samples during centrifugation. They are used to separate substances of varying densities (such as cells, precipitates, or biological macro molecules) by subjecting them to high-speed rotational forces. They are widely used in molecular biology, biochemistry, and clinical diagnostics.

II. Product Features

1. Available with different packs: bulk, rack. With conical tubes and skirted tubes.
2. Different volume available: 0.5ml/1.5ml/2.0ml/5ml/15ml/50ml.
3. Made of polystyrene (PP) tube and high-density polyethylene (HDPE) cap.
4. DNase & RNase free, human DNA free.

III. Instructions for Use

Step 1: Sample Loading

Fill the tube with the sample liquid. Do not exceed **80%** of the tube's total capacity. Overfilling can cause leakage and contamination.

Step 2: Sealing

Securely fasten the cap or plug.

For **screw-cap tubes**, tighten firmly by hand.

For **snap-cap (press-fit) tubes**, ensure an audible "click" is heard to confirm the seal is secure.

Step 3: Balancing (Critical Step)

Place the filled tube on a laboratory balance.

Prepare a counterbalance tube (filled with water or a liquid of similar density) so that the weight difference between the two tubes is ≤ 0.1 g.

Load the tubes into the centrifuge rotor in **strictly symmetrical positions** (directly opposite each other). If you have an odd number of samples, use a balance tube filled with water to complete the symmetry.

Step 4: Centrifugation

Close the centrifuge lid securely.

Set the parameters. It is highly recommended to use **Relative Centrifugal Force (RCF, $\times g$)** rather than Revolutions Per Minute (RPM) for reproducible results.

Start the centrifuge and allow it to reach the set speed. Do not leave the instrument unattended until it is running smoothly.

Step 5: Sample Retrieval

Wait for the rotor to come to a **complete stop** before opening the centrifuge lid. Never attempt to open the lid or stop the rotor manually while it is spinning.

Carefully remove the tubes, ensuring you do not disturb the separated pellet or layers.

V. Precautions

1. **Strict Balancing:** Failure to balance the rotor can cause severe vibration, damage to the centrifuge, and potential injury.
2. **Single Use Only:** Plastic centrifuge tubes are designed for single use. Reusing tubes can lead to cross-contamination or damage during centrifugation.
3. **Chemical Compatibility:** Ensure the tube material is compatible with your sample. For example, avoid using standard plastic tubes with strong organic solvents (like DMSO or chloroform) unless specified as chemically resistant.