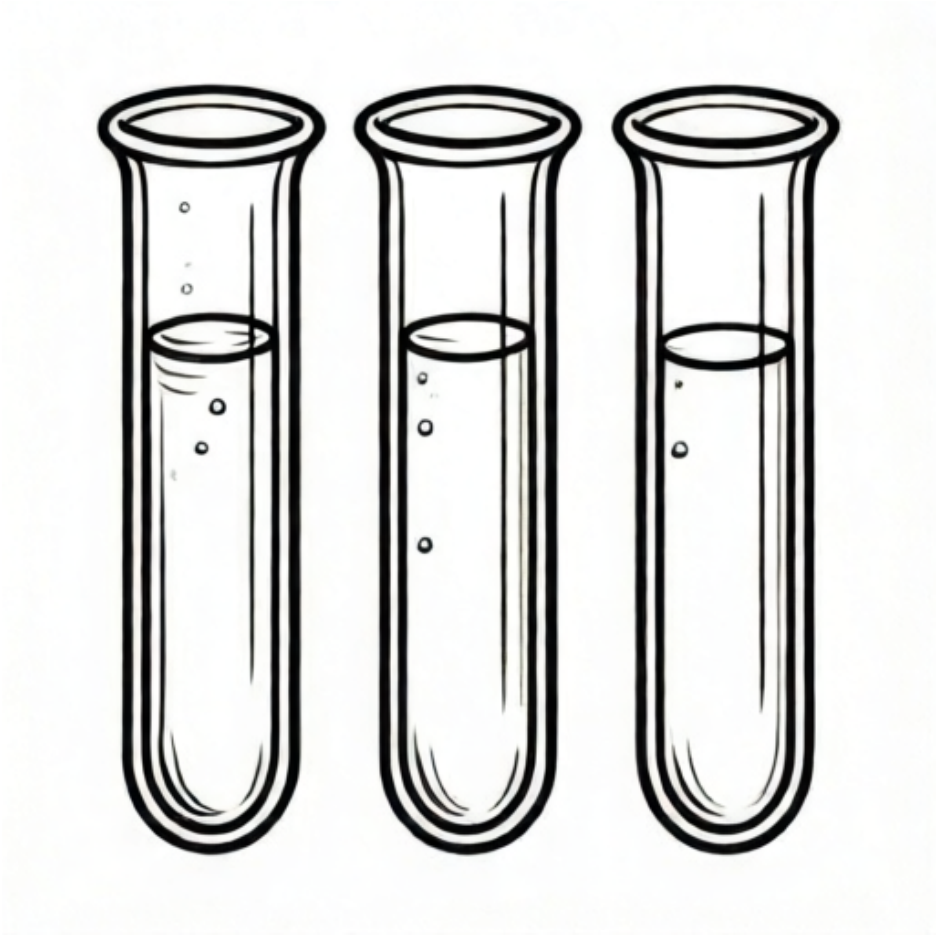
Draw Test Tubes with Rim Ellipses and Liquid Levels

Ordinary topic reference / separately checked pixels



Draw Test Tubes with Rim Ellipses and Liquid Levels

Original worked example / unchanged complete key

Prompt: Draw a test tube 10 cm tall and 2 cm wide with a liquid level 6 cm from the bottom curve start, placed in a rack bar 8 cm wide and 1 cm tall. Use the convention: rim ellipse major axis 2 cm, minor axis 0.6 cm; liquid surface ellipse major axis 2 cm, minor axis 0.3 cm.

Answer: Draw a centerline 10 cm long. Mark the top rim and bottom curve start. Draw parallel sides 2 cm apart and a semicircular bottom with radius 1 cm. Draw the rim ellipse with major axis 2 cm and minor axis 0.6 cm, darkening the front half. Measure 6 cm up from the bottom curve start and draw the liquid surface ellipse with major axis 2 cm and minor axis 0.3 cm. Check: 10 cm total minus 6 cm liquid equals 4 cm empty space. Draw the rack bar 8 cm by 1 cm below the rim, with a hole ellipse centered on the centerline and tube sides aligned to the hole edges.