Consider cork of arbitrary shape and volume V surrounded by a water with density ρ_w. The force the liquid exerts on an cork within the liquid is equal to the weight of the liquid with a volume equal to that of the displaced body of liquid V_{dis}. This force (buoyancy) is applied in a direction opposite to gravitational force, that is of magnitude

$$F = g\rho_w V_{dis}.$$

Since the cork is floating, the net force equal to zero.

$$F_{net} = g\rho_w V_{dis} - mg = 0.$$

The volume of water which will be displaced

$$V_{dis} = \frac{mg}{g\rho_w} = \frac{m}{\rho_w}.$$

Because the density of the salty water is higher than the density of tap water, so

$$(V_{dis})_{salty\ water} < (V_{dis})_{tap\ water}.$$

Answer. The more volume of water will be displaced in the case of tap water.

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