

Lab, Surface Tension

Name _____ Period _____

PURPOSE: To measure the surface tension of cold and hot water and compare them.

PROCEDURE:

1. Measure the length and width of the block in cm. _____ cm.
2. Calculate the area of the bottom in cm^2 .
.
3. Balance the block while it just touches the water surface and record its mass in grams. _____ g.
4. Carefully increase the force until the block just pulls free of the surface and record the mass in grams. _____ g.
5. Determine the surface tension in grams by taking the difference between #4 and #3. _____ g.
6. Calculate the surface tension in g/cm^2 .
.
7. Convert grams/cm^2 to $\text{newtons}/\text{cm}^2$. (1 kg = 9.8 n, so 1 g = 0.01 n).
.
8. Repeat 3-7 using hot water.
.
.
9. Compare the surface tensions between cold and hot water.
.
10. Explain why there is a difference.
.

CRITIQUE: