

PHYS 232C Lab 1. Fluids

I. Density

Measure the density of water directly, that is, by measuring the mass of a known volume of water. Calculate the error on this measurement and compare your result with a table of densities.

II. Archimedes' principle

Quantitatively test Archimedes' principle. Measure the buoyant force on many objects with various densities and volumes. Plot the volume of the object vs the buoyant force, fit the data to a line and find the slope. Use the slope to find the density of water.

You are free to use any available lab equipment.