

Physics 1114 - General Physics I

Lab 6 - 2012.07.18

Overview: We will attempt to verify Archimedes's Principle.

Details: Conceptual analysis 13.7 on page 419 demonstrates how the measured weight of a beaker of water changes as an object is slowly submersed into the beaker. In lab, you are to duplicate this setup. You will start by measure the weight of the beaker filled with water. Once done, you are to take a metal cylinder (there are 4 different cylinders made of 4 different materials), slowly submerge it into the water, and compute the change in mass at various stopping places. Finally, you are to measure the mass once the cylinder is resting fully on the bottom of the beaker. Repeat this for each of the 4 types of metal cylinders.

Once you have done your measurements, you should compare the results to the theoretical changes in the weight. Examples 13.7 along with its conceptual analysis will be good clues as to how this should be done.