

Preparing the Calorimeters

Prepare the calorimeters before the lab so that they are ready for use. To make the calorimeter, obtain 8-oz wide-mouth insulated hot/cold containers (available at supermarkets and discount stores). Some containers may have a compartment inside the lid for storing utensils, etc. Be sure to remove this compartment before drilling. Remove the lid, turn it upside down, and drill two 12 mm (1/2 in) holes in the lid. Place the holes so that the outside edge of each hole is within the raised sealing lip on the bottom of the lid. Test the holes to be sure that the rubber stoppers will fit snugly in the hole.



Photos courtesy of Wellesley College Chemistry Department, Nick Doe.

The laboratory calorimeter can be reused in other labs. It avoids the possibility of breakage associated with vacuum thermos bottles, and the large plastic screw lid improves accuracy since it allows students to take measurements without removing the lid.