Enthalpy of reactants lab report assignment

Calorimeter is used because the knowledge f the amount of energy needed to produce a reaction is extremely useful to scientists studying chemistry. Coffee-cup calorimeter occurs inside of a Styrofoam cup. A known volume of water is poured into the cup and a thermometer is placed through the lid and under the surface of the water. When the chemical reaction occurs in the cup, the heat of the reaction is absorbed by the water. The change in water temperature is then used to calculate the amount heat released or absorbed in the reaction.

In this experiment, coffee-cup calorimeter is being used to measure he enthalpy of the reaction between HAPPY and Noah. Apparatus Materials Thermometer- measures degrees Celsius, may be measured wrong Styrofoam cup- holds water and reactants for the calorimeter, do not knock over 2- ml beakers- used to measure reactants, may be measured wrong Glass stirring rod- used to stir 2- ml graduated cylinders- use to measure out solutions, may be measured wrong. 0. 60 M phosphoric acid solution- toxic to blood, liver, skin, eyes, bone marrow. Wear goggles and apron (Phosphoric acid MASS) 1. 85 M sodium hydroxide solution- toxic to lungs.

Limit exposure (Sodium Hydroxide MASS) Procedure 1 . Obtain and wear goggles. It is best to conduct this experiment in a well- ventilated room. 2. Nest a Styrofoam cup in a ml beaker. 3. Measure out 50. Ml of 0. 60 M HAPPY solution into the foam cup. 4. Measure out 50. Ml of the 1. 85 M Noah solution and transfer it to a ml beaker. 5. Obtain the initial temperature of the HAPPY solution. 6. Add the 50. Ml of Noah solution to the Styrofoam cup all at once. 7. Record the temperature every 30 seconds for up to 10 minutes. Stop recording the temperature once the readings have stopped

changing for four consecutive readings. Record the initial and maximum temperatures and the temperature change in your data table.