Result: Average heat produced by MgO when it reacts with the HCl is -547.038 for this experiment. Maybe an error occurred during the experiment which resulted in lower heat than expected.

Discussion: Hess's Law states that the total enthalpy change for the reaction is the sum of all heat. The calorimeter is assembled by placing one cup inside the other so that no heat transforms from cup to environment. The reason for the difference between the theoretical and experimental heats of reaction is maybe because of the amount of the MgO or maybe because of temperature of the HCl before the reaction. No, the answer isn't within the expected experimental error (5%) relative to the theoretical results. The possible sources of error in this experiment are amount of the MgO or maybe because of temperature of the HCl before the reaction.

Conclusion: The Purpose of the experiment is to determined magnesium oxide heat with use of the hess law and calorimeter. The purpose was able to achieved by reacting to two different trails, one with magnesium and HCl and another with magnesium oxide reacting to HCl in the calorimeter and measuring the change in the temperature and calucting the heat produced by each reaction.

In this expirement it was able to achived the experimental heats of reaction of magnesium oxide but with 9% percent of error occurred during the experiment. The possible sources of error in this experiment are amount of the MgO or maybe because of temperature of the HCl before the reaction. future improvements to this experiment are measuring the change in temperate more precisely and accurately and measuring the Magnesium Oxide in the electronic balances.