In this lab solutions, solids, and solvents will be combined to verify Hess’s Law. Hess’s Law says that the path taken to get to the final destination will vary, but the result will always be the same. Results being the equations and enthalpy values. The enthalpies that will be utilized today are neutralization and solvent (water).

The purpose of this experiment is to prove that Hess’s Law is credible. BY doing this we take the initial temperature of a solution and combine it to produce water and salt. During this process the final temperature is recorded to obtain the change is temperature when these to components are mixed. The graph determines this change using extrapolation.

Once the experiment is performed, the enthalpy value can be determined using these calculations:

q=MST / #of moles = H

The equations are then combined and using Hess’s Law. This proves that the enthalpy of the reactions compares with the calculated values thus proving the Heat of Neutralization/Solvent using Hess’s Law.