View the Energy Exchanges Associated with Dissolving Salts in the Water tutorial at:

http://group.chem.iastate.edu/Greenbowe/sections/projectfolder/flashfiles/thermochem/heat\_soln.html

(a) Choose 1.00 g of zinc sulfate and 20.00 mL of water.

(b) Perform the experiment.

(c) Record the masses and temperatures (initial and final).

(d) Calculate the heat exchange (q).

(e) Calculate the enthalpy of solution (∆H) per mole of solute used.

Repeat this process (a-e), but double the amount of zinc sulfate.

(f) How did the calculation change?

(g) Repeat this process (a-e) but use 1.00 g of zinc sulfate and 40.00 mL of water.

(h) How did the calculation change?

(i) Is zinc sulfate dissolving in water an exothermic or endothermic change?

Explain.

(j) Repeat steps a-i with various solutes.

(k) Of this set, which solute would create the best hand warmer? Explain your answer.

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