Chemistry 30: Molar Heat of Neutralization Lab Teacher notes

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Partner \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Score \_\_\_\_ / 12

Problem: What will be the effect on the molar heat of neutralization of a base, if it is neutralized by different acids?

Diluted acids:

Each group will need 20 mL of each diluted acid

For a class of 25 you will need 500 mL …. See instructions below

HCl (12.1 ) 41.3 mL in 500 mL of distilled water

H2SO4 (16.0) 31.3 mL in 500 mL of distilled water

HNO3 (15.9 ) 31.4 mL in 500 mL of distilled water

Diluted Bases

Each group will need 80 mL of diluted base

For a class of 25 you will need 2000 mL

Dissolve 80 g of NaOH­(s) in 2000 mL of distilled water

Results

The calculations for molar heat of neutralization of NaOH(aq) should turn out to be close, but not identical