VALENCIACOLLEGE

Experiment 6: Neutralization Capacity of an Antacid

Version 2

Name: _____ Date: _____

Lab Partner: _____ Section: _____

Experimental Data and Calculations

Table 1. Determination of Concentration HCl Solution. (Part A due next Lab.)

1) NaOH concentration written on carboy	
2) HCl concentration written on carboy	
3) Solution A concentration (Theoretical value)	
4) Solution B concentration (Theoretical value)	

	Trial 1*	Trial 2	Trial 3
5) Volume of HCl sample			
6) Initial buret reading			
7) Final buret reading			
8) Volume NaOH added			
9) Moles of NaOH			
10) Moles HCl			
11) Molar concentration of HCl Sln B (Experimental Value)			
12) Mean molar concentration of Solution B			
13) Standard deviation			
14) RSD			
15) Relative percent error (%)			

* Show calculations for Trial 1, standard deviation, RSD and relative % error. (Continue on back of sheet if needed.)

Name: _____

Data Table 2. Determination of Neutralization Capacity of Antacid

1) Antacid Brand			
2) Active ingredient and amount (from label)			
3) Concentration of NaOH			
4) Average molar concentration of HCl Solution B (from Part A)			
	Trial 1*	Trial 2	Trial 3
5) Mass of tablet			
6) Mass of pulverized antacid sample			
7) Volume of HCl sample			
8) Initial buret reading			
9) Final buret reading			
10) Volume of NaOH added			
11) Moles of NaOH			
12) Moles of HCl in excess			
13) Moles of HCl added to analyte			
14) Moles of HCl that reacted with active ingredient in sample			
15) Moles of active ingredient in sample			
16) Mass of active ingredient in sample			
17) Amount of active ingredient per tablet			

18) Mean amount of active ingredient per tablet	
19) Standard deviation for active ingredient per tablet	
20) RSD for active ingredient per tablet	
21) Relative percent error (%)	

*Show all calculations related to Trial 1, standard deviation, RSD, and relative % error.

Report: Include tables 1 and 2, calculations, answer the post lab question and write a conclusion.