Lab sheet #6

-Buffer Capacity-

Method:

- 1. You are provided with two acetate buffer (pH=5), 0.1 M and 0.2 M acetate buffer.
- 2. In one beaker add 10ml of the 0.1 M acetate buffer, and in another beaker add 10ml of 0.2 M acetate buffer.
- 3. Start the titration by adding 0.5 ml of 0.1 M HCl from the burette and determine the pH of the solution after each addition.
- 4. Continue adding acid in until pH falls to about 2 pH units from your starting pH.
- 5. Recorded your result in the tables below

Results:

0.1 M acetate buffer, pH= 5:		0.2 M acetate buffer, pH= 5:	
pH value	0.1M HCl (ml)	pH value	0.1M HCl (ml)
	At 0 ml		At 0 ml

- 1. Plot a Curve of pH against ml of HCl added.
- 2. determine the practical buffer capacity in the acid directions, from the graph and the formula.

Acetate buffer	practical capacity (from the formula)	practical capacity (from the curve)
0.1M Acetate buffer		
0.2M Acetate buffer		

In the Discussion

- Which buffer has more capacity, and why?
- Compare the value of the buffer capacity you got from the curve and formula.
- Discuss and compare the titration curves of the two buffers
- Do you think your buffer has a larger capacity for acid or base? Why?