**Lab sheet #6**

**-Buffer Capacity-**

**Method:**

1. You are provided 0.1 M acetate buffer (pH=5).
2. In two beakers add 8ml of the 0.1 M acetate buffer.
3. Titrate the first beaker by adding 0.5 ml of 0.1 M HCl and the second one by 0.1 M NaOH from the burette and determine the pH of the solution after each addition.
4. Continue adding the acid/base until you record a notable change in the pH.
5. Record the titration table.

**Results and calculations:**

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| **pH value** | **0.1M HCl (ml)** |
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| **pH value** | **0.1M NaOH (ml)** |
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**Calculate the instantaneous (β) and the** **buffer capacity in the acid and base directions of your buffer ( 0.1 M acetate buffer , pH=5 and pKa= 4.76):**

1. Concentration of weak acid and its conjugate base:

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1. The instantaneous buffer capacity (β):

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1. Buffer capacity in the acid direction (BCa):

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1. Buffer capacity in the alkaline direction (BCb):

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