

Buffers Student Worksheet

Data Table

	Beaker #1	Beaker #2	Beaker #3	Beaker #4
Initial color of the solution				
Color after adding 5 drops of HCl				
Final color after adding HCl				
Color after adding 5 drops of NaOH				
Final color after adding NaOH				

Discussion Questions

1. How much acid was added to beaker 2 compared to beaker 1 to obtain the same color change? Explain the different color changes in beaker 1 versus beaker 2.

2. How much base was added to beaker 2 compared to beaker 1 to obtain the same color change? Explain the different color changes in beaker 3 versus beaker 4.

3. Buffers resist changes in pH. How would a protein react to a change in pH? In your answer include information about the functional groups on the amino acids as well as structural changes to the protein.