**Adventures with Buffer Solutions**

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Course\_\_\_\_\_\_Section\_\_\_\_\_\_Date\_\_\_\_\_\_\_\_\_

What is your birthday (day only needed)? \_\_\_\_\_\_\_\_\_\_\_

What compounds were used to prepare your buffer? \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_

How many grams of each did you use? \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_

What pH was the targeted value? \_\_\_\_\_\_\_\_\_\_\_

What pH did you calculate using activity coefficients? \_\_\_\_\_\_\_\_\_\_\_

What was the pH of the deionized water? \_\_\_\_\_\_\_\_\_\_\_

What was the pH of the D.I. water after HCl addition? \_\_\_\_\_\_\_\_\_\_\_

What was the pH of the D.I. water after NaOH addition? \_\_\_\_\_\_\_\_\_\_\_

**High Buffer Capacity**

Measured pH \_\_\_\_\_\_\_\_\_\_\_

pH when HCl is added \_\_\_\_\_\_\_\_\_\_\_

pH when NaOH is added \_\_\_\_\_\_\_\_\_\_\_

Calculated buffer capacity against acids \_\_\_\_\_\_\_\_\_\_\_

Calculated buffer capacity against bases \_\_\_\_\_\_\_\_\_\_\_

**Medium Buffer Capacity**

Measured pH \_\_\_\_\_\_\_\_\_\_\_

pH when HCl is added \_\_\_\_\_\_\_\_\_\_\_

pH when NaOH is added \_\_\_\_\_\_\_\_\_\_\_

Calculated buffer capacity against acids \_\_\_\_\_\_\_\_\_\_\_

Calculated buffer capacity against bases \_\_\_\_\_\_\_\_\_\_\_

**Low Buffer Capacity**

Measured pH \_\_\_\_\_\_\_\_\_\_\_

pH when HCl is added \_\_\_\_\_\_\_\_\_\_\_

pH when NaOH is added \_\_\_\_\_\_\_\_\_\_\_

Calculated buffer capacity against acids \_\_\_\_\_\_\_\_\_\_\_

Calculated buffer capacity against bases \_\_\_\_\_\_\_\_\_\_\_

*Single Species Buffer*

Grams added of basic species \_\_\_\_\_\_\_\_\_\_\_

mL of HCl added to reach target pH \_\_\_\_\_\_\_\_\_\_\_

End pH \_\_\_\_\_\_\_\_\_\_\_