Stoichiometry: Solids and Solutions – Determining the Molarity of a Solution

Name: _____ **Lab TA:** _____

Lab Day **Mon** ○ **Tue(am)** ○ **Tue(pm)** ○ **Wed** ○ **Thu(am)** ○ **Thur(pm)** ○ **Fri** ○

Grade

	>95	>90	>85	>80	>70	<70
Report:	☐	☐	☐	☐	☐	☐

Prelaboratory Quiz Score:

Data Collection and Calculations:

	Trial T	Trial 1	Trial 2	Trial 3 *(If required)*	Trial 4 *(If required)*
1. Weight of $KHC_8H_4O_4$					
Moles of $KHC_8H_4O_4$					
2. Final buret reading.					
Initial buret reading.					
Volume of NaOH.					
Moles of NaOH					
3. Molarity of NaOH					
4. Average molarity of NaOH.					
5. % Difference					

For Trial 1, show detailed calculational method for:

2. Moles of NaOH	**3.** Molarity of NaOH

Post Laboratory Question:

Your TA will not help you with this final question.

In a very similar experiment to the one that you have just performed a solution of calcium hydroxide required 26.42mL to neutralize 0.914g of potassium hydrogen phthalate. What was the molarity of the calcium hydroxide solution? [For full credit you must show and label your calculational method]

$$Ca(OH)_2 + 2KHC_8H_4O_4 = CaC_8H_4O_4 + K_2C_8H_4O_4 + 2H_2O$$

Molar Masses:

$KHC_8H_4O_4$: 204.24g/mol