Chem 101 Laboratory Exercise #2 Laboratory Notebook

Moles, Concentration, Acid-Base Reactions and Quantitative Analysis by Titration

Name: Arfaz Hossain
Lab Section: B12??
Quad: ??
Date: October 5, 2023

In-lab Notes:

EXPERIMENT 1:
Experimental Procedure for standardising a solution of NaOH using a titration:

Initial Without NaOH Solution Volume: 200mL
Final with added NaOH Solution: 212mL

1st
KHP Amount: 560g
Burette Reading Initial: 41.5mL
Burette Reading Final: 26.2mL

2nd
KHP Amount: 536g
Burette Reading Initial: 42.8mL
Burette Reading Final: 29.5mL

3rd
KHP Amount: 583g
Burette Reading Initial: 44.6mL
Burette Reading Final: 32.5mL

EXPERIMENT 2 (Vineger):

1st
Vineger Amount: 23mL
Burette Reading Initial: 30.1mL
Burette Reading Final: 10.5mL

1st
Vineger Amount: 23mL
Burette Reading Initial: 41.4mL

Burette Reading Final: 24.7mL

1st

Vineger Amount: 23mL
Burette Reading Initial: 24.7mL
Burette Reading Final: 5.1mL

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Moles, Concentration, Acid-Base Reactions and Quantitative Analysis by Titration

Name: Arfaz Hossain
Lab Section: B12
Quad: 2
Date: October 5, 2023

Experimental Procedures:

Abstract:

Data:

Experiment 1	Trial #1	Trial #2	Trial #3
KHP Mass (g)	560 g	536 g	583 g
NaOH Initial (mL)	41.5 mL	42.8 mL	44.6 mL
NaOH Final (mL)	26.2 mL	29.5 mL	32.5 mL
NaOH Difference (mL)	15.3 mL	13.3 mL	12.1 mL

Experiment 2	Trial #1	Trial #2	Trial #3
Vinegar Volume (mL)	23.5 mL	27 mL	26 mL
NaOH Initial (mL)	30.1 mL	41.4 mL	24.7 mL
NaOH Final (mL)	10.5 mL	24.7 mL	5.1 mL
NaOH Difference (mL)	19.6 mL	16.7 mL	19.6 mL

Results:

Experiment 1	**Trial #1**	**Trial #2**	**Trial #3**
KHP Moles	2.74 moles	2.62 moles	2.85 moles
Volume of NaOH used	0.0153 L	0.0133 L	0.0121 L
Standardized NaOH Concentration (g/moles)	179.08 mol/L	196.99 mol/L	235.53 mol/L

Experiment 1	**Trial #1**	**Trial #2**	**Trial #3**
CH_3COOH Moles	0.02003845 moles	0.0230229 moles	0.0221702 moles
Volume of NaOH used	0.0196 L	0.0167L	0.0196 L
Standardized NaOH Concentration (g/moles)	mol/L	mol/L	mol/L

Algebraic Equations:

Discussion:

Conclusions:

References: