College Chemistry Laboratory Report

Your Name Lab section

Experiment date: _____

1 Purpose and hypothesis

Measure the concentration of an unknown monoprotic acid by titration with a standard base. Write a quantitative hypothesis before beginning the experiment.

2 Safety and waste

List the relevant hazards, personal protective equipment, spill response, and waste container. Do not omit hazards simply because the quantities are small.

3 Reaction and procedure

$$\mathrm{HA(aq) + OH^-(aq) \longrightarrow A^-(aq) + H_2O(l)}$$

Record the balanced equation, glassware, rinsing steps, indicator or endpoint method, and the number of concordant trials.

4 Observations and data

Table 1: Titration readings; replace the example values with observations.

Trial	Initial burette (mL)	Final burette (mL)	Delivered (mL)
Rough	0.10	24.80	24.70
1	0.20	24.62	24.42
2	0.10	24.50	24.40
3	0.00	24.39	24.39

5 Calculations and evaluation

Show one sample calculation, the mean titre, significant figures, and the uncertainty or range. Compare the result with the expected concentration and separate random variation from systematic effects such as endpoint judgement, glassware calibration, or incomplete rinsing.

6 Conclusion

Report the unknown concentration with units and uncertainty. Decide whether the hypothesis was supported and identify one specific procedural improvement.