

Titration Worksheet

As you work through the steps in the lab procedures, record your experimental values and the results on this worksheet.

Table A1: Titration of Vinegar

	Trial 1	Trial 2	Trial 3
Mass of flask	g	g	g
Volume of vinegar	mL	mL	mL
Mass of flask + vinegar	g	g	g
Mass of vinegar	g	g	g
Concentration of NaOH	M	NA	NA
Initial buret reading	mL	mL	mL
Final buret reading	mL	mL	mL
Volume of titrant added	mL	mL	mL

Question 1: Calculate the number of millimoles of NaOH required to reach the endpoint for each trial. Show one calculation completely. What is the average? Record the values in Data Table A2.

Question 2: How many millimoles of acetic acid are in each vinegar sample? Show one calculation completely. What is the average? Record the values in Data Table A2.

Question 3: What is the mass of acetic acid in each vinegar sample? Show one calculation completely. What is the average? Record the values in Data Table A2.

Question 4: What is the molarity of acetic acid in each vinegar sample? Show one calculation completely. What is the average? Record the values in Data Table A2.

Question 5: What is the mass % of acetic acid in each vinegar sample? Show one calculation completely. What is the average? Record the values in Data Table A2.

Table A2: Calculation Results for Titration of Vinegar

	Trial 1	Trial 2	Trial 3	Average
mmol of NaOH				
mmol of HC ₂ H ₃ O ₂				
Mass of HC ₂ H ₃ O ₂	g	g	g	g
Molarity of HC ₂ H ₃ O ₂ in vinegar	M	M	M	M
Mass % of HC ₂ H ₃ O ₂ in vinegar				