CHEM 1110: DETERMINATION OF ASCORBIC ACID IN VITAMIN C

Date:_____ Name:_____Lab Day/Time:_____

Objective

To determine the percentage of ascorbic acid in an unknown solution of ascorbic acid.

Procedure

As in Chem 1110 lab manual, pages _____

Observations

Data

Table 1. Mass of KIO₃

Mass of KIO ₃ and weighing boat (g)	
Mass of <i>emptied</i> boat (g)	
Mass of KIO ₃ emptied into flask (g)	

Table 2. Titration Data

Unknown Number:	Run 1	Run 2	Run 3	Run 4 if needed
Volume of unknown solution pipetted (mL)				
Initial burette reading (mL of KIO ₃)				
Final burette reading (mL of KIO ₃)				
Volume of KIO ₃ delivered (mL)				
End point colour and shade				

Calculations

In the space below, show the following calculations:

1. The % difference between all runs

2. The molarity of the KIO₃ solution in the 250 mL volumetric flask

3. Moles of IO_3^- used

4. Moles of I_3^- produced

5. Moles of ascorbic acid present

6. Mass of Ascorbic acid present

7. Mass of unknown solution that was used

8. % Ascorbic acid in unknown solution

9. Calculate the Average

Table 3. Se	ummary of	Calculations
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Run Number		
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Moles of IO ₃ ⁻ used		
Moles of I_3^- produced		
Moles of Ascorbic Acid		
present		
Mass of Ascorbic Acid		
Present		
Mass of Unknown Solution		
% Ascorbic Acid in unknown solution		

Results

Table 4. Summary of Results

Average % Ascorbic Acid in Unknown #					
Circle which runs you used to calculate the average?	1	2	3	4	

Discussion

Give one possible source of error beyond your reasonable control in the experiment, and explain how and why this would affect your result.

Conclusion

Questions

Attach any questions assigned by your lab instructor.