*There is a video to accompany this task that you need to view*

**Unit 2: Analysis experiment**

AOS2

**Aim**: To determine the concentration of a HCl concentration

**Part A: Gravimetric**

The HCl was mixed with silver nitrate.

1. a. Write a balanced equation for this reaction.

b. Identify the precipitate.

2. Use to the video to fill in

Mass of filter paper \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Mass of watchglass \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Mass of precipitate + filterpaper + precipitate \_\_\_\_\_\_\_\_

3. a. Use the masses above to determine the mass of precipitate.

b. Calculate the number of mole of precipitate.

c. What was the number of mole of HCl?

d. Determine the concentration of the HCl solution.

4. a. Given the procedure followed, what you expect the result to be more likely to be high or low. Justify your

answer.

b. Could you use this procedure for any ionic solution?

c. Why is it important to use excess silver nitrate?

**Part B: volumetric**

The burette readings were

Run 1 0mL to 13.1 mL Run 2 13.1 mL to 26.1 mL Run 3 26.1 mL to 39.3 mL

5. Use these readings out in a table and determine the mean titre.

6. a. Calculate the number of mole of NaOH

b. Calculate the number of mole of HCl

c. Determine the concentration of the HCl

7. How does your answer to Part A compare to B?

8. Can you use a volumetric analysis on any ionic solution?