Procedure

Step 1: Obtain unknown, in a 250 ml Beaker add 2 g of unknown chloride XCl.

Step 2: Add water to XCl, fill beaker to 100ml level by adding water, stir solution until XCl is completely dissolved.

Step 3: Add .25M Potassium Chromate, add 4 ml of Potassium Chromate to the solution. The solution will turn a yellowish color.

Step 4: Add 1M $AgNO_3$: Obtain a 50ml buret and fill with 1M $AgNO_3$, add $AgNO_3$ to XCl solution. A precipitate of AgCl will form and gradually settle. Continue to add $AgNO_3$ until the solution turns from yellow to brownish-red and a reddish Ag_2NO_3 precipitate forms. Record the final volume of $AgNO_3$ from the buret.

Steo 5: Repeat steps 1-4, two more times and average the results.