Chemistry 20 Solution Stoichiometry - Precipitate Lab

(3) Complete / neatly done

(1) **Purpose**:
1 Part B - to produce and collect a precipitate, and then compare theoretical and experimental results

(5) **Background Information**:
1 *solution* - homogeneous mixture of a solute and a solvent
1 *reactant* - a chemical used in a reaction
1 *product* - a chemical produced in a chemical reaction
1 *precipitate* - a solid product formed via a chemical reaction
1 *filtrate* - the solution which goes through the filter paper

(2) **Experimental Design**:
1 *manipulated variable* - amount of sodium carbonate solution
1 *responding variable* - amount of precipitate collected

(4) **Procedure**:
1 *Ask the teacher for the required amounts of each solution.*
1 *Rinse pipet before collecting the second solution.*
1 *Weigh filter paper before use.*
1 *Rinse out the reactants beaker into the filter paper.*

(5) **Observations**:
1 Mass of filter paper
1 Mass of filter paper + precipitate
1 Mass of precipitate
1 The reaction produced a milky white precipitate.
1 Some of the precipitate stuck to the side of the reactants beaker.

Conclusion

(5) Part A
2 $K_2CO_{3\,(aq)} + CaCl_{2\,(aq)} \rightarrow 2\,KCl_{\,(aq)} + CaCO_{3\,(s)}$
3 calculation of theoretical mass
0.50 g of calcium carbonate

(5) Part B
2 Percent error calculation
1 Source of error -- some precipitate stuck to the beaker
2 Filtrate ions -- chloride and sodium ions

_____ out of **30**