

**Experiment No. (1) Purification of Salt**

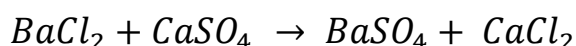
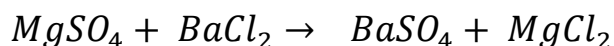
- The aim of this experiment is to get pure salt which is formed from Sodium Chloride NaCl by purifying crude salt which contains impurities like Magnesium Sulfate  $MgSO_4$  and Calcium Sulfate  $CaSO_4$ .

**Instruments:**

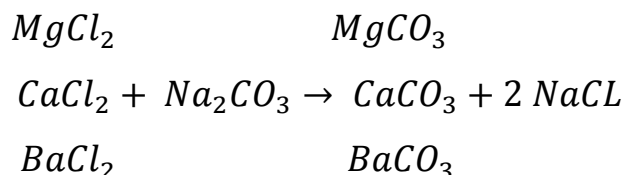
1. Beaker
2. Funnel
3. Dropper

**Procedure:**

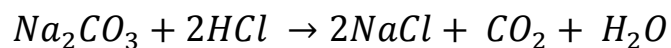
1. Dissolve (5gm) of salt in (25ml) of distilled water, and then do filtration if necessary.
2. Add Barium Chloride  $BaCl_2$  to the solution drop by drop to precipitate Barium Sulfate  $BaSO_4$ . Then the solution is filtered and two drops of Barium Chloride  $BaCl_2$  are added to ensure completion of precipitation.



3. Add Sodium Carbonate  $Na_2CO_3$  gradually to precipitate Magnesium and Barium and calcium.



4. Add diluted Hydrochloric acid to the pervious precipitant, until the solution is balanced and pure salt is formed according to the fallowing equation.



5. Place the solution that resulted from pervious step in clay dish , heat it until the water evaporate and salt forms, filter the salt crystals wash them with water and dry them in oven. Now you have pure salt.
6. Calculation: measure the weight of crude and pure salt.