

Cobalt(II) carbonate



This compound is formed in the form of a pink-violet powder, stable in air. Decomposes on strong heating. It does not dissolve in water or ammonia; however, it dissolves in acids.

Cobalt(II) carbonate can be obtained according to the reaction:



Realization:

1. Weigh into one beaker 3.63 g $\text{Co(NO}_3)_2 \cdot 6 \text{H}_2\text{O}$, into the second beaker 3.75 g $\text{Na}_2\text{CO}_3 \cdot 10 \text{H}_2\text{O}$. Add 25 cm³ of hot distilled water to each beaker and mix the salt to dissolve with the stirring rod.
2. Then add Na_2CO_3 solution to $\text{Co(NO}_3)_2$ solution.
3. Cool the resulting precipitate and filter (optionally under vacuum).
4. The precipitate on the funnel is rinsed with distilled water to a neutral filtrate (check the pH with indicator paper by taking drops from the funnel leg).
5. Dry the precipitate with the filter between folded sheets of paper at room temperature.
6. After drying, weigh the precipitate and calculate the process efficiency.

Equipment:

- Beakers - 2 x 250 cm³,
- Graduated cylinder for 50 cm³,
- Stirring rod,
- Filtration kit (with filter paper).

Reagents:

- Cobalt(II) nitrate hexahydrate $\text{Co(NO}_3)_2 \cdot 6 \text{H}_2\text{O}$ – 3.63 g,
- Sodium carbonate $\text{Na}_2\text{CO}_3 \cdot 10 \text{H}_2\text{O}$ – 3.25 g.

