**Answer on Question #54715 - Chemistry – General Chemistry**

Question

Aluminum metal reacts with aqueous cobalt(II) nitrate to form aqueous aluminum nitrate and cobalt metal. What is the stoichiometric coefficient for cobalt when the chemical equation is balanced using the lowest whole-number stoichiometric coefficients?

Answer:

The reaction between aluminum and aqueous cobalt(II) nitrate:

$$2Al + 3Co(NO_3)_2 = 2Al(NO_3)_3 + 3Co$$
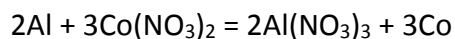
In this balanced reaction equation all stoichiometric coefficients are the lowest whole-number. So, the stoichiometric coefficient for cobalt is 3.

Answer: 3