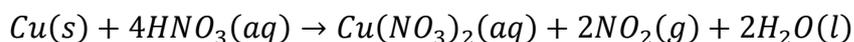


Answer on Question #56712 - Chemistry - General Chemistry

Question:

Consider the balanced reaction between Cu and nitric acid shown below. If 1.55 g of $\text{Cu}(\text{NO}_3)_2$ ($M_w = 187.6 \text{ g/mol}$) was obtained from the reaction of 0.95 g of Cu ($M_w = 63.55 \text{ g/mol}$) with excess HNO_3 , what is the percent yield of the reaction?



Solution.

0.95 g of Cu is 0,015 mol

$$M = \frac{m}{M_w} = \frac{0.95g}{63.55g/mol} = 0.015mol$$

In result of reaction should get 0.015 mol of $\text{Cu}(\text{NO}_3)_2$ which is 2,81 g

$$m = M \times M_w = 0.015mol \times 187.6g/mol = 2.81g$$

Thus, percent yield of the reaction is

$$\frac{1.55g}{2.81g} \times 100\% = 55.16\%$$

Answer: 55.16%