

Answer to Question #57222 - Chemistry - Other

Question:

A student analyzes a sample and finds out it contains 25% of NaCl. After that he realises the sample contained KCl instead of NaCl. What is the % concentration of KCl in the sample?

Solution:

$$M_r(\text{NaCl}) = 58.44$$

$$M_r(\text{KCl}) = 74.55$$

$$\frac{w(\text{NaCl})}{w(\text{KCl})} = \frac{M_r(\text{NaCl})}{M_r(\text{KCl})}$$

$$w(\text{KCl}) = \frac{M_r(\text{KCl}) \times w(\text{NaCl})}{M_r(\text{NaCl})}$$

$$w(\text{KCl}) = \frac{74.55 \times 25}{58.44} = 31.9 \%$$

Answer:

31.9 %