

Answer on Question #73789 – Chemistry – General Chemistry

Task:

Mixture consists of 17.5 g of salt, 13.5 g of silicon dioxide, and 2.6 g of aluminum carbonate. Determine the percentage of salt in the mixture.

Solution:

$$m(\text{SiO}_2) = 13.5 \text{ g};$$

$$m(\text{Al}_2(\text{CO}_3)_3) = 2.6 \text{ g}.$$

$$m(\text{all}) = m(\text{salt}) + m(\text{SiO}_2) + m(\text{Al}_2(\text{CO}_3)_3);$$

$$m(\text{all}) = 17.5 + 13.5 + 2.6 = 33.6 \text{ g}.$$

$$w(\text{salt}) = \frac{m(\text{salt})}{m(\text{all})} = \frac{17.5}{33.6} = 0.5208 \text{ or } 52.08\%$$

Answer: 52.08% of salt.