Answer on Question #65278 - Chemistry – Other

Task:

A chemist requires 0.423 mol Na_2CO_3 for a reaction. How many grams does this correspond to?

Solution:

Sodium carbonate (Na_2CO_3) has a molar mass equal to 105.9888 g/mol.

On this basis,

1 mol Na_2CO_3 has a mass equal to 105.9888 g;

0.423 mol Na_2CO_3 has a mass equal to X g.

Then,

$$X = m(Na_2CO_3) = \frac{0.423\,mol \times 105.9888g}{1\,mol} = 44.8333g.$$

Answer: 44.8333g grams does this correspond to 0.423 mol Na_2CO_3.