

Question #50182, Chemistry, Other

How many formula units does 200.0 grams of calcium carbonate represent?

Answer:

CaCO₃ - calcium carbonate

M(CaCO₃)= 100 g/mol

m(CaCO₃)=200.0 g

$$n(\text{CaCO}_3) = \frac{m}{M} = \frac{200}{100} = 2 \text{ mol}$$

$$\text{formul.units} = n \cdot N_A = 2 \cdot 6.022 \cdot 10^{23} = \mathbf{1.2044 \cdot 10^{24}}$$