

Answer on the question #64105, Chemistry / General Chemistry

Question:

How many moles of oxygen are 7.58×10^{20} molecules

Solution:

In accordance with Avogadro constant, it has been established by the scientific community that 1 mole of the substance contains $6.022 \cdot 10^{23}$ molecules.

This means that for $7.58 \cdot 10^{20}$ molecules,

$$n = \frac{N}{N_A} = \frac{7.58 \cdot 10^{20}}{6.022 \cdot 10^{23} (\text{mol}^{-1})} = 1.26 \cdot 10^{-3} (\text{mol})$$

Answer: 0.00126 mol

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