Answer to Question #58875, Chemistry / General Chemistry

Find the number of atoms in 9.45g of alumunium.

Solution:

$$N = n \times N_A$$
$$n = \frac{m}{M_r}$$
$$N = \frac{m}{M_r} \times N_A$$

Avogadro constant
$N_A = 6.022 \times 10^{23}$ mol^{-1}
For Aluminum
$M_r = 26.982$ g/mol

$$N(Al) = \frac{9.45}{26.982} \times 6.022 \times 10^{23} = 2.11 \times 10^{23} \ atoms$$

Answer:
2.11×10^{23} atoms