Question #85141, Chemistry / General Chemistry | for completion

How many carbon atoms are in 32.5 g of isopropyl alcohol (59.09g/mol C3H7O)?

Solution:

Formula and molar mass have been corrected

$n(C_3H_7OH) = \frac{m}{M} = \frac{32,5 \text{ g}}{60.09 \text{ g/mol}} = 0.54085 \text{ mol}$

$N = n \cdot N_A = 0,54085 \cdot 6.02 \cdot 10^{23} = 3.2559 \cdot 10^{23}$

$N_{\text{"C" atoms}} = N \cdot 3 = 3.2559 \cdot 10^{23} \cdot 3 = 9.7677 \cdot 10^{23}$

Answer: $9.7677 \cdot 10^{23}$ atoms "C"

Answer provided by www.AssignmentExpert.com