Answer on Question #55854 – Chemistry – General Chemistry

Question:

What is the mass (in grams) of 9.29×10^{24} molecules of methanol (CH_3OH)?

Answer:

$$n = \frac{N}{N_A} = \frac{m}{M}$$

where n – is a number of moles of a substance(mol), N – is the number of molecules, N_A – is a Avogadro's constant(mol^{-1}), m – mass of a substance(g), M – molar mass of a substance (g/mol).

Then $m = \frac{M*N}{N_A} = \frac{32.04*9.29*10^{24}}{6.02*10^{23}} = 494.44 \ g$

Answer:　　　**949.44g** is the mass of **methanol.**