

## Answer on the question #62822, Chemistry / General chemistry

How do you find moles?

**Answer:**

The mole is the unit of measurement in the International System of Units (SI) for amount of substance. The mole is amount of a system which contains the same number of elementary entities (e.g. atoms, molecules, ions, electrons, photons) as atom in 0.012 kg of Carbon-12 ( $^{12}\text{C}$ ). Thus, one mole of pure  $^{12}\text{C}$  has a mass exactly 12 g.

Definition of mole for atom(s) – ratio between the number of atom(s) and Avogadro's constant:

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

For molecule(s) – ration between the mass and molar mass of the molecule(s):

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

For gas(es) (in case when the substance is in a gas phase) – ration between the volume of the particles and molar volume ( $V_m=22.4 \text{ L/mole}$ )

$$n = \frac{V}{V_m}$$

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