

Mole fraction

[@wikipedia](#)

Synonym: [Mole fraction](#) = [Molar fraction](#)

A ratio of [amount](#) of a given [mixture component](#) to the total [amount of substance](#) ν in the [mixture](#):

$$(1) \quad x_i = \frac{\nu_i}{\nu} = \frac{N_i}{N}$$

where

$\nu_i = N_i/N_A$	amount of substance of the i -th mixture component
$\nu = \sum_i \nu_i$	total amount of substance in the mixture
N_A	Avogadro constant
N_i	amount of molecules/atoms in the i -th mixture component
$N = \sum_i N_i$	total amount of molecules/atoms in the mixture

As per definition the sum of all [mole fractions](#) is strictly unit: $\sum_i x_i = 1$.

See Also

[Natural Science](#) / [Chemistry](#) / [Chemical Substance](#) / [Mixture](#)

[[Pure substance](#)]