

atomic mass

The atomic mass (m_a) is the [mass](#) of specific [isotope](#) of a given [atom](#), most often expressed in unified atomic mass units. The atomic mass may be considered to be the total mass of [protons](#), [neutrons](#) and [electrons](#) in a single [atom](#) (when the [atom](#) is motionless). The atomic mass is sometimes incorrectly used as a [synonym](#) of **relative atomic mass**, **average atomic mass** and [atomic weight](#); these differ subtly from the atomic mass. The atomic mass is defined as the [mass](#) of an [atom](#), which can only be one [isotope](#) at a time and is not an abundance-weighted average as in the case of [atomic weight](#). In the case of many elements that have one dominant [isotope](#) the actual numerical similarity/difference between the atomic mass of the most common [isotope](#) and the relative atomic mass or standard atomic weights can be very small such that it does not affect most bulk calculations - but such an error can be critical when considering individual atoms. For elements with more than one common [isotope](#) the difference even to the most common atomic mass can be half a mass unit or more (e.g. [chlorine](#)). The atomic mass of an uncommon [isotope](#) can differ from the relative atomic mass or standard [atomic weight](#) by several mass units. [Wikipedia]

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