

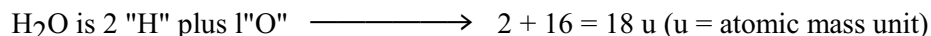
Molecular Mass and Formula Mass

We have only carried out calculations on elements. Calculations may also be carried out with compounds.

Molecular Mass

Applies to covalent compounds. It is the mass of one molecule of such a compound, expressed in atomic mass units. To calculate the molecular mass, add the atomic masses of all the atoms present in the molecule.

e.g. The molecular mass of water molecule is 18 u.



e.g. The molecular mass of CO_2 is 44 u.

Formula Mass

Applies to Ionic compounds. It is the mass of the smallest grouping of an ionic compounds expressed in atomic mass unit amu. The calculation is the same *as* that for molecular mass. Students often use these terms interchangeably, but note that they should be used in their correct context.

e.g. The formula mass of sodium carbonate, Na_2CO_3 is...

Molar Mass

The molar mass of a compound is the molecular mass of a molecule of that compound expressed in *grams / mol*. This is to say that the molecular mass, or formula mass, may be converted to molar mass by simply changing the units from amu to g/mol.

e.g. The molecular mass of H_2SO_4 is 98u.

Therefore, the molar mass of H_2SO_4 is 98 g/mol.

Hence, you can find the molar mass of any compound if you know the formula.

Home work

Read section 11.4 pages 345-346

Page 346: Practice Problem 11-6

Page 377: # 10,11,14 and 15