

Chemical Formula By Chemistry Notes Info

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Molecular Formula

Glucose (a sugar)

Molecular Formula = $C_6H_{12}O_6$

- 6 atoms carbon, C
- 12 atoms hydrogen, H
- 6 atoms oxygen, O

Atomic mass

- The average mass of the atoms of an element as they occur in nature
- Atomic mass units, amu
- 1 amu = 1/12th the mass of one carbon-12 atom
- The mass of an electron is very small so more than 99.9% of the mass of the carbon-12 atom are the 6 protons and 6 neutrons (about the same mass)
- 1 amu \approx the weight of one subatomic particle (neutron or proton)
- 1 amu = 1.66×10^{-24} g (a very small number!)
- **Symbol used in chemistry and Formula used in chemistry**
- **Symbol used in chemistry**
 - d= density
 - v= volume
 - m= mass
 - Cp= specific heat
 - q= heat
 - ΔT = change in temperature
 - K= Kelvin
 - C= Celsius
- **Formula used in chemistry**
 - $d=m/v$
 - $v=m/d$

$$m = v \cdot d$$

$$C_p = q / (m \cdot \Delta T)$$

$$q = C_p \cdot m \cdot \Delta T$$

$$\Delta T = q / C_p \cdot m$$

$$m = q / C_p \cdot \Delta T$$

$$T_f = q / m \cdot C_p + T_i$$

$$T_i = q / m \cdot C_p + T_f \text{ (then divide everything on the right by negative 1 [-1]) **this formula isn't used as often as } T_f$$

$$t(^{\circ}\text{C}) = T(\text{K}) - 273.15\text{K} \text{ --used to find Celsius}$$

$$T(\text{K}) = t(^{\circ}\text{C}) + 273.1^{\circ}\text{C} \text{ -- used to find Kelvin}$$

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