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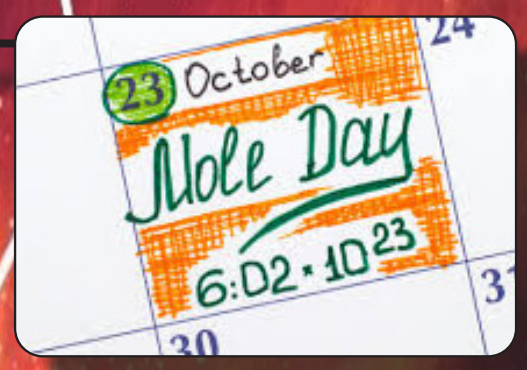
International Mole Day

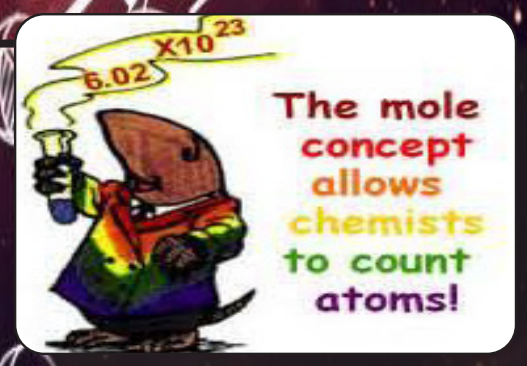


Why is Mole Day celebrated?

It is celebrated to commemorate Avogadro's Number (6.022×10^{23}). Mole Day is celebrated annually on October 23 from 6:02 a.m. to 6:02 p.m. One Mole of a particular substance is equal to 6.02×10^{23} particles of that substance. It is a basic measuring unit in chemistry.

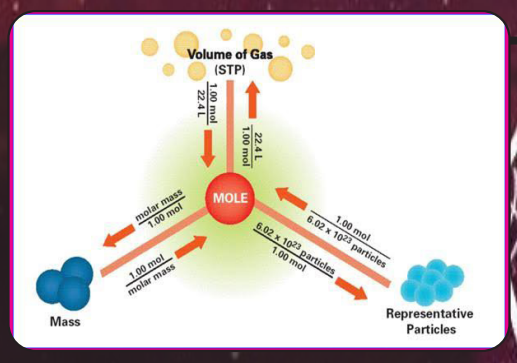
When did Avogadro discover the Mole?

Avogadro proposed his hypothesis in 1811. At that time there was no data at all on the number of particles in a mole, or an agreement on any atomic weights or the standard. The first measurements which could give an approximate value for Avogadro's number were observations of Brownian motion by Robert Brown in 1827.



What is the purpose of Mole in Chemistry?

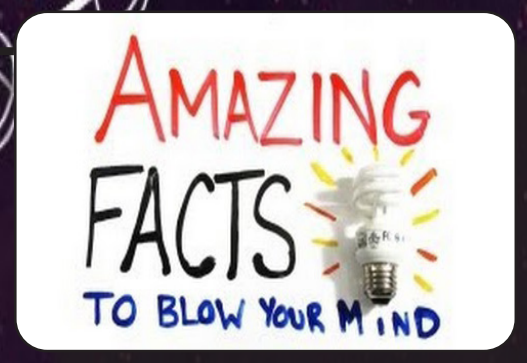
Atoms, molecules and formula units are very small and very difficult to work with usually. However, the mole allows a chemist to work with amounts large enough to use.
A mole of something represents 6.022×10^{23} items. Whether it be atom, molecule or formula unit.
Defining the mole in this way allows you change grams to moles or moles to particles. Even though you can't see the particles.



Why is Mole Day important?

Atoms and molecules react with one another particle. The mole is translation factor between masses and number of particles. The mole is important because it allows chemists to work with the subatomic world with macro world units and amounts.

What is this year's Mole Day theme? This year's punny National Mole Day theme is **MOLEzilla!.**



Why is Mole so Special?

If there were a mole of rice grains, all the land area in the whole world would be covered with rice to a depth of about 75 meters. Computers can count at the rate of over 800 million counts per second. At this rate it would take a computer over 25 million years to count to 6.022×10^{23}. Assuming that each human being has 60 trillion body cells (6.0×10^{13}) and the Earth's population is 6 billion (6×10^{9}), the total number of living human body cells on the Earth at the present time is 3.6×10^{23} or a little over half of a mole.

Editorial,

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