2.9: The Amount of Substance

Chemists use the mole so often to measure how much of a substance is present that it is convenient to have a name for the quantity which this unit measures. In the International System this quantity is called the **amount of substance** and is given the symbol *n*. Here again a common English word has been given a very specific scientific meaning. Although *amount* might refer to volume or mass in everyday speech, in chemistry it does not. When a chemist asks what amount of Br_2 was added to a test tube, an answer like "0.0678 mol Br_2" is expected. This would indicate that $0.0678 \times 6.022 \times 10^{23}$ or 4.08×10^{22}, Br_2 molecules had been added to the test tube.

Video 2.9.1: The word "mole" suggests a small, furry burrowing animal to many. But in this lesson, we look at the concept of the mole in chemistry. Learn the incredible magnitude of the mole--and how something so big can help us calculate the tiniest particles in the world. Lesson by Daniel Dulek, animation by Augenblick Studios.