Lesson 77: Mass Relationships Key Terms
Chemistry with Lab

1. **Avogadro's number** – The number of molecules in a mole of a substance, approximately 6.0225×10^{23}.

2. **Mole** – The amount of a substance that contains as many atoms, molecules, ions, or other elementary units as the number of atoms in 0.012 kilograms of carbon 12. The number is 6.0225×10^{23}, or Avogadro's number.

3. **Molar mass** – symbol M, is a physical property characteristic of a given substance, namely its mass per amount of substance. The base SI unit for mass is the kilogram and that for the amount of substance is the mole, thus the derived unit for molar mass is kg/mol. However, for both practical and historical reasons, molar masses are almost always quoted in grams per mole (g/mol).

4. **Empirical formula** – A chemical formula that indicates the relative proportions of the elements in a molecule rather than the actual number of atoms of the elements.

5. **Molecular formula** – A chemical formula that shows the number and kinds of atoms in a molecule.

6. **Hydrate** – A solid compound containing water molecules combined in a definite ratio as an integral part of the crystal.

7. **Percentage composition** – The mass percent of each element in a compound.