

2.5 The Names and Formulas of Compounds

Everything in this chapter can be found in your Nomenclature ISU.

- IUPAC = International Union of Pure and Applied Chemists

Definitions

- Chemical nomenclature
- Binary compounds
- Valence
- Multivalent
- Tertiary compound
- Oxyanion
- Hydrate
- Oxyacid

Binary Ionic Compounds

- Metal/non-metal compound use crossover method
- Some metals are multivalent. Know how to use both the ous/ic method and the stock method.
- E.g. NaCl FeO Fe₂O₃

Compounds with Polyatomic Ions

- Tertiary compounds are metals bonded to polyatomic ions.
- Oxyanions are polyatomic ions with oxygen.
 - ClO⁻ hypochlorite ion
 - ClO₂⁻ chlorite ion
 - ClO₃⁻ chlorate ion
 - ClO₄⁻ perchlorate ion

Hydrates

- Anhydrous compounds have not water attached to them. E.g. CuSO_{4(s)} (gray powder)
- Hydrates are compounds with water attached. E.g. CuSO₄•5H₂O_(s) (blue crystal)

Naming Molecular Compounds

- Non-metal/non-metal compound still use the crossover method and use prefixes when naming.
- E.g. CF₄ CO CO₂

Naming Acids

- Binary acids and oxyacids.
- Review tables on page 99

Naming Bases

- Hydroxides.

Homework

- Practice: 1,2,3,4,5,6,7,8,9,10,11,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27
- Section: 1,2,3