Common Anions & Cations (negative & positive ions)

Monatomic Ions (single atomed ions)

|  |  |  |
| --- | --- | --- |
| 1+ | 2+ | 3+ |

|  |  |  |
| --- | --- | --- |
| hydrogen H1+  lithium Li1+  sodium Na1+  potassium K1+  rubidium Rb1+  cesium Cs1+  silver Ag1+ | beryllium Be2+  magnesium Mg2+  calcium Ca2+  strontium Sr2+  barium Ba2+  zinc Zn2+  cadmium Cd2+ | aluminum Al3+ |

|  |  |  |
| --- | --- | --- |
| 1- | 2- | 3- |

|  |  |  |
| --- | --- | --- |
| hydride H1-  fluoride F1-  chloride Cl1-  bromide Br1-  iodide I1- | oxide O2-  sulfide S2- | phosphide P3-  nitride N3- |

Polyatomic Ions (many atomed ions)

|  |  |  |
| --- | --- | --- |
| 1- | 2- | 3- |

|  |  |  |
| --- | --- | --- |
| hydroxide OH1-  acetate C2H3O21-  permanganate MnO41-  iodate IO31-  cyanide CN1-  cyanate OCN1-  thiocyanate SCN1-  nitrate NO31-  nitrite NO21-  perchlorate ClO41-  chlorate ClO31-  chlorite ClO21-  hypochlorite ClO1-  hydrogen carbonate HCO31-  (bicarbonate)  hydrogen sulfate HSO41-  (bisulfate)  hydrogen sulfite HSO31-  (bisulfite)  dihydrogen phosphate H2PO41- | carbonate CO32-  chromate CrO42-  dichromate Cr2O72-  oxalate C2O42-  silicate SiO32-  peroxide O22-  sulfate SO42-  sulfite SO32-  hydrogen phosphate HPO42- | arsenate AsO43-  arsenite AsO33-  phosphate PO43-  phosphite PO33- |

Transition Metal Ions

|  |  |  |
| --- | --- | --- |
| 1+ | 2+ | 3+ |

|  |  |  |
| --- | --- | --- |
| ammonium NH41+  hydronium H301+  copper (I) Cu1+  cuprous | copper (II) Cu2+  cupric  iron (II) Fe2+  ferrous  mercury (I) Hg22+  mercurous  mercury (II) Hg2+  mercuric  tin (II) Sn2+  stannous  lead (II) Pb2+  plumbous  cobalt (II) Co2+  nickel (II) Ni2+ | iron (III) Fe3+  ferric  cobalt (III) Co3+  chromium (III) Cr3+  chromic |

|  |
| --- |
| 4+ |

|  |
| --- |
| tin (IV) Sn4+  stannic  lead (IV) Pb4+  plumbic |

All transition metal ions except zinc, cadmium, and silver may have varying (different) oxidation states (charges). For example, titanium (IV) and titanium (II). Therefore, when naming compounds that contain transition metals (other than Zn, Cd, and Ag) one must note the charge of the anion in order to determine the charge of the transition metal.