Common Oxidation States for Monatomic Ions

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| H+ hydrogen ion |  |  |  |  | H- hydride ion |
| Li+ lithium ion | Be2+ beryllium ion |  | N3- nitride ion | O2- oxide ion | F- fluoride ion |
| Na+ sodium ion | Mg2+ magnesium ion | Al3+ aluminum ion | P3- phosphide ion | S2- sulfide ion | Cl- chloride ion |
| K+ potassium ion | Ca2+ calcium ion |  |  | Se2- selenide ion | Br- bromide ion |
| Rb+ rubidium ion | Sr2+ strontium ion |  |  |  | I- iodide ion |
| Cs+ cesium ionAg+ silver ion | Ba2+ barium ionCd2+ cadmium ionZn2+ zinc ion |  |  |  |  |

Common Metal Ions with More than One Ionic Charge

|  |  |  |
| --- | --- | --- |
| **Formula** | **Common Name** | **Latin Name** |
| Cu+ | Copper (I) ion | Cuprous ion |
| Cu2+ | Copper (II) ion | Cupric ion |
| Fe2+ | Iron (II) ion | Ferrous ion |
| Fe3+ | Iron (III) ion | Ferric ion |
| Hg2+ | Mercury (II) ion | Mercuric ion |
| Hg22+ | Mercury (I) ion | Mercurous ion |
| Pb2+ | Lead (II) ion | Plumbous ion |
| Pb4+ | Lead (IV) ion | Plumbic ion |
| Sn2+ | Tin (II) ion | Stannous ion |
| Sn4+ | Tin (IV) ion | Stannic ion |
| Cr2+ | Chromium (II) ion | Chromous ion |
| Cr3+ | Chromium (III) ion | Chromic ion |
| Mn2+ | Manganese (II) ion | Manganous ion |
| Mn3+ | Manganese (III) ion | Manganic ion |
| Co2+ | Cobalt (II) ion | Cobaltous ion |
| Co3+Au1+Au3+ | Cobalt (III) ionGold (I) ionGold (III) ion | Cobaltic ionAurous ionAuric ion |

Common Polyatomic Ions

|  |  |  |  |
| --- | --- | --- | --- |
| C2H3O2- acetate | CO32- carbonate | PO43- phosphate | HCO3- bicarbonate (hydrogen carbonate) |
| CN- cyanide | CrO42- chromate | PO33- phosphite | HSO4- bisulfate (hydrogen sulfate) |
| OH- hydroxide | Cr2O72- dichromate |  | HSO3- bisulfite (hydrogen sulfite) |
| NO3- nitrate | C2O42- oxalate |  | HPO42- biphosphate (hydrogen hosphate) |
| NO2- nitrite | SiO32- silicate |  | HPO32- biphosphite (hydrogen phosphite) |
| MnO4- permanganate | SO42- sulfate |  | H2PO4-  dihydrogen phosphate |
| ClO- hypochlorite | SO32- sulfite |  | H2PO3- dihydrogen phosphite |
| ClO2- chlorite | S2O32- thiosulfate |  |  |
| ClO3- chlorate | O22- peroxide |  |  |
| ClO4- perchlorate |  |  |  |
| BrO- hypobromite |  |  |  |
| BrO2- bromite |  |  | NH4+ ammonium ion |
| BrO3- bromate |  |  |  |
| BrO4- perbromate |  |  |  |
| IO3- iodate |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

Diatomic Molecules

|  |
| --- |
| H2 hydrogen N2 nitrogen O2 oxygen F2 fluorine Cl2 chlorine Br2 bromine I2 iodine |