

VALENCE NUMBERS

| ELEMENT | SYMBOL | VALENCE |
|------------------------|--|---------|
| <u>Common Radicals</u> | | |
| Ammonium | NH ₄ | +1 |
| Hydroxide | OH | -1 |
| Cyanide | CN | -1 |
| Cyanate | OCN | -1 |
| Bicarbonate | HCO ₃ | -1 |
| Acetate | C ₂ H ₃ O ₂ | -1 |
| Permanganate | MnO ₄ | -1 |
| Thiosulphate | S ₂ O ₃ | -1 |
| Thiocyanate | SCN | -1 |
| Carbonate | CO ₃ | -2 |
| Chromate | CrO ₄ | -2 |
| Dichromate | Cr ₂ O ₇ | -2 |
| Oxalate | C ₂ O ₄ | -2 |

(OXIDATION NUMBERS)

| ELEMENT | SYMBOL | VALENCE |
|------------------------|--------------------------------|---------|
| <u>Parent Radicals</u> | | |
| Chlorate | ClO ₃ | -1 |
| Fluorate | FO ₃ | -1 |
| Bromate | BrO ₃ | -1 |
| Iodate | IO ₃ | -1 |
| Nitrate | NO ₃ | -1 |
| Dihydrogen Phosphate | H ₂ PO ₄ | -1 |
| Silicate | SiO ₃ | -2 |
| Sulphate | SO ₄ | -2 |
| Hydrogen Phosphate | HPO ₄ | -2 |
| Phosphate | PO ₄ | -3 |
| Arsenate | AsO ₄ | -3 |

Example of Daughter Radicals

| | | |
|-------------------|------------------|----|
| Perchlorate | ClO ₄ | -1 |
| Chlorate (Parent) | ClO ₃ | -1 |
| Chlorite | ClO ₂ | -1 |
| Hypochlorite | ClO | -1 |

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|--------------------------|--------|---------|
| <u>Monovalent Metals</u> | | |
| Sodium | Na | +1 |
| Potassium | K | +1 |
| Silver | Ag | +1 |
| Lithium | Li | +1 |
| Rubidium | Rb | +1 |
| Cesium | Cs | +1 |
| Magnesium | Mg | +2 |
| Calcium | Ca | +2 |
| Strontium | Sr | +2 |
| Barium | Ba | +2 |
| Zinc | Zn | +2 |
| Cadmium | Cd | +2 |
| Manganese | Mn | +2 |
| Boron | B | +3 |
| Aluminum | Al | +3 |
| Bismuth | Bi | +3 |
| Gallium | Ga | +3 |

(OXIDATION NUMBERS)

| ELEMENT | SYMBOL | VALENCE |
|-----------------------------|--------|----------|
| <u>Multivalent Elements</u> | | |
| Gold | Au | +1,+3 |
| Cobalt | Co | +2,+3 |
| Copper | Cu | +1,+2 |
| Iron | Fe | +2,+3 |
| Mercury | Hg | +1,+2 |
| Lead | Pb | +2,+4 |
| Tin | Sn | +2,+4 |
| Tungsten | W | +6,+3,+2 |
| Nitrogen | N | -3,+3,+5 |
| Phosphorous | P | -3,+3,+5 |
| Arsenic | As | -3,+3,+5 |
| Antimony | Sb | -3,+3,+5 |
| Hydrogen | H | -1,+1 |
| Chromium | Cr | +2,+3,+6 |

Prefixes

| | |
|-------|----|
| Mono | 1 |
| Di | 2 |
| Tri | 3 |
| Tetra | 4 |
| Penta | 5 |
| Hexa | 6 |
| Hepta | 7 |
| Octa | 8 |
| Nona | 9 |
| Deca | 10 |

Common Non-Metals

| | | |
|----------|----|----|
| Fluorine | F | -1 |
| Chlorine | Cl | -1 |
| Bromine | Br | -1 |
| Oxygen | O | -2 |
| Sulphur | S | -2 |
| Selenium | Se | -2 |