

## Symbols and Charges for Monoatomic Ions- Fixed Charge

| SYMBOL           | NAME          | SYMBOL           | NAME          | SYMBOL           | NAME      |
|------------------|---------------|------------------|---------------|------------------|-----------|
| H <sup>+</sup>   | hydrogen ion  | Ba <sup>2+</sup> | barium ion    | I <sup>-</sup>   | iodide    |
| Li <sup>+</sup>  | lithium ion   | Ra <sup>2+</sup> | radium ion    | O <sup>2-</sup>  | oxide     |
| Na <sup>+</sup>  | sodium ion    | Be <sup>2+</sup> | beryllium ion | S <sup>2-</sup>  | sulfide   |
| K <sup>+</sup>   | potassium ion | Zn <sup>2+</sup> | zinc ion      | Se <sup>2-</sup> | selenide  |
| Rb <sup>+</sup>  | rubidium ion  | Al <sup>3+</sup> | aluminum ion  | Te <sup>2-</sup> | telluride |
| Cs <sup>+</sup>  | cesium ion    |                  |               | N <sup>3-</sup>  | nitride   |
| Ag <sup>+</sup>  | silver ion    | H <sup>-</sup>   | hydride       | P <sup>3-</sup>  | phosphide |
| Mg <sup>2+</sup> | magnesium ion | F <sup>-</sup>   | fluoride      | As <sup>3-</sup> | arsenide  |
| Ca <sup>2+</sup> | calcium ion   | Cl <sup>-</sup>  | chloride      | C <sup>4-</sup>  | carbide   |
| Sr <sup>2+</sup> | strontium ion | Br <sup>-</sup>  | bromide       |                  |           |

## Symbols and Charges for Monoatomic Ions- Variable Charge

| Symbol           | Systematic name<br>(Stöck system) | Common name | Symbol                        | Systematic name<br>(Stöck system) | Common name |
|------------------|-----------------------------------|-------------|-------------------------------|-----------------------------------|-------------|
| Cu <sup>+</sup>  | copper(I)                         | cuprous     | Hg <sub>2</sub> <sup>2+</sup> | mercury(I)                        | mercurous   |
| Cu <sup>2+</sup> | copper(II)                        | cupric      | Hg <sup>2+</sup>              | mercury(II)                       | mercuric    |
| Fe <sup>2+</sup> | iron(II)                          | ferrous     | Pb <sup>2+</sup>              | lead(II)                          | plumbous    |
| Fe <sup>3+</sup> | iron(III)                         | ferric      | Pb <sup>4+</sup>              | lead(IV)                          | plumbic     |
| Sn <sup>2+</sup> | tin(II)                           | stannous    | Co <sup>2+</sup>              | cobalt(II)                        | cobaltous   |
| Sn <sup>4+</sup> | tin(IV)                           | stannic     | Co <sup>3+</sup>              | cobalt(III)                       | cobaltic    |
| Cr <sup>2+</sup> | chromium(II)                      | chromous    | Au <sup>+</sup>               | gold(I)                           | aurous      |
| Cr <sup>3+</sup> | chromium(III)                     | chromic     | Au <sup>3+</sup>              | gold(III)                         | auric       |
| Mn <sup>2+</sup> | manganese(II)                     | manganous   | Ni <sup>2+</sup>              | nickel(II)                        | nickelous   |
| Mn <sup>3+</sup> | manganese(III)                    | manganic    | Ni <sup>3+</sup>              | nickel(III)                       | nickelic    |

## Symbols and Charges for Polyatomic Ions

| Formula                                                   | Name                                        | Formula                                                    | Name               |
|-----------------------------------------------------------|---------------------------------------------|------------------------------------------------------------|--------------------|
| NO <sub>3</sub> <sup>-</sup>                              | nitrate                                     | CrO <sub>4</sub> <sup>2-</sup>                             | chromate           |
| NO <sub>2</sub> <sup>-</sup>                              | nitrite                                     | S <sub>2</sub> O <sub>3</sub> <sup>2-</sup>                | thiosulfate        |
| CN <sup>-</sup>                                           | cyanide                                     | Cr <sub>2</sub> O <sub>7</sub> <sup>2-</sup>               | dichromate         |
| MnO <sub>4</sub> <sup>-</sup>                             | permanganate                                | CO <sub>3</sub> <sup>2-</sup>                              | carbonate          |
| OH <sup>-</sup>                                           | hydroxide                                   | O <sub>2</sub> <sup>2-</sup>                               | peroxide           |
| NH <sub>2</sub> <sup>-</sup>                              | amide                                       | SO <sub>4</sub> <sup>2-</sup>                              | sulfate            |
| C <sub>6</sub> H <sub>5</sub> COO <sup>-</sup>            | benzoate                                    | SO <sub>3</sub> <sup>2-</sup>                              | sulfite            |
| CrO <sub>2</sub> <sup>-</sup>                             | chromite                                    | C <sub>2</sub> <sup>2-</sup>                               | carbide            |
| OCN <sup>-</sup>                                          | cyanate                                     | C <sub>2</sub> O <sub>4</sub> <sup>2-</sup>                | oxalate            |
| SCN <sup>-</sup>                                          | thiocyanate                                 | SeO <sub>4</sub> <sup>2-</sup>                             | selenate           |
| O <sub>2</sub> <sup>-</sup>                               | superoxide                                  | C <sub>4</sub> H <sub>4</sub> O <sub>6</sub> <sup>2-</sup> | tartrate           |
| AlO <sub>2</sub> <sup>-</sup>                             | aluminate                                   | MoO <sub>4</sub> <sup>2-</sup>                             | molybdate          |
| ClO <sub>4</sub> <sup>-</sup>                             | perchlorate                                 | B <sub>4</sub> O <sub>7</sub> <sup>2-</sup>                | tetraborate        |
| ClO <sub>3</sub> <sup>-</sup>                             | chlorate                                    | HPO <sub>3</sub> <sup>2-</sup>                             | hydrogen phosphite |
| ClO <sub>2</sub> <sup>-</sup>                             | chlorite                                    | HPO <sub>4</sub> <sup>2-</sup>                             | hydrogen phosphate |
| ClO <sup>-</sup>                                          | hypochlorite                                | SiF <sub>6</sub> <sup>2-</sup>                             | hexafluorosilicate |
| IO <sub>4</sub> <sup>-</sup>                              | periodate                                   | SiO <sub>3</sub> <sup>2-</sup>                             | metasilicate       |
| IO <sub>3</sub> <sup>-</sup>                              | iodate                                      | C <sub>4</sub> H <sub>4</sub> O <sub>6</sub> <sup>2-</sup> | tartrate           |
| IO <sup>-</sup>                                           | hypoiodite                                  | TeO <sub>4</sub> <sup>2-</sup>                             | tellurate          |
| BrO <sub>3</sub> <sup>-</sup>                             | bromate                                     | WO <sub>4</sub> <sup>2-</sup>                              | tungstate          |
| BrO <sup>-</sup>                                          | hypobromite                                 | PO <sub>4</sub> <sup>3-</sup>                              | phosphate          |
| HSO <sub>4</sub> <sup>-</sup>                             | hydrogen sulfate (bisulfate)                | PO <sub>3</sub> <sup>3-</sup>                              | phosphite          |
| HSO <sub>3</sub> <sup>-</sup>                             | hydrogen sulfite (bisulfite)                | PO <sub>2</sub> <sup>3-</sup>                              | hypophosphite      |
| HC <sub>2</sub> O <sub>4</sub> <sup>-</sup>               | hydrogen oxalate (binoxalate)               | AsO <sub>4</sub> <sup>3-</sup>                             | arsenate           |
| HS <sup>-</sup>                                           | hydrogen sulfide                            | BO <sub>3</sub> <sup>3-</sup>                              | borate             |
| H <sub>2</sub> PO <sub>4</sub> <sup>-</sup>               | dihydrogen phosphate                        | AlO <sub>3</sub> <sup>3-</sup>                             | aluminate          |
| C <sub>2</sub> H <sub>3</sub> O <sub>2</sub> <sup>-</sup> | acetate (CH <sub>3</sub> COO <sup>-</sup> ) | C <sub>6</sub> H <sub>5</sub> O <sub>7</sub> <sup>3-</sup> | citrate            |
| HCO <sub>3</sub> <sup>-</sup>                             | hydrogen carbonate (bicarbonate)            | SiO <sub>4</sub> <sup>4-</sup>                             | orthosilicate      |
| N <sub>3</sub> <sup>-</sup>                               | azide                                       | P <sub>2</sub> O <sub>7</sub> <sup>4-</sup>                | pyrophosphate      |
| NH <sub>4</sub> <sup>+</sup>                              | ammonium ion                                | H <sub>3</sub> O <sup>+</sup>                              | hydronium          |