

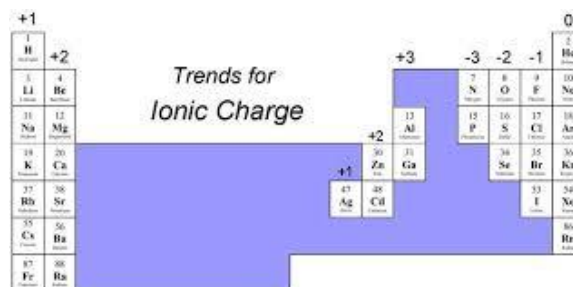
# Chemistry Monatomic Ion Chart

goal: learn names, formulas and charges of ions, including correct spelling

## Monatomic Ions with Set Charges

|                  |               |
|------------------|---------------|
| F <sup>-</sup>   | fluoride      |
| Cl <sup>-</sup>  | chloride      |
| Br <sup>-</sup>  | bromide       |
| I <sup>-</sup>   | iodide        |
| O <sup>2-</sup>  | oxide         |
| S <sup>2-</sup>  | sulfide       |
| Se <sup>2-</sup> | selenide      |
| N <sup>3-</sup>  | nitride       |
| P <sup>3-</sup>  | phosphide     |
| H <sup>+</sup>   | hydrogen ion  |
| Li <sup>+</sup>  | lithium ion   |
| Na <sup>+</sup>  | sodium ion    |
| K <sup>+</sup>   | potassium ion |
| Rb <sup>+</sup>  | rubidium ion  |
| Cs <sup>+</sup>  | cesium ion    |
| Be <sup>2+</sup> | beryllium ion |
| Mg <sup>2+</sup> | magnesium ion |
| Ca <sup>2+</sup> | calcium ion   |
| Sr <sup>2+</sup> | strontium ion |
| Ba <sup>2+</sup> | barium ion    |
| Al <sup>3+</sup> | aluminum ion  |

When atoms gain or lose electrons they form ions (charged particles). The number of electrons gained or lost and therefore the charge of monatomic ions is determined by the number of valence electrons in the atom. Chemical families (columns on the periodic table of the elements) have the same number of valence electrons and therefore the same ionic charge. The image below will help you to relate the position of the element on the periodic table to its ionic charge.



NOTE: For negative ions, the name of the element changes to an “ide” ending. For positive ions, we include the word ion to differentiate between the charged particle and the neutral atom.

In the symbols of the ions, the charge is written as a superscript. For charges of +1 or -1, the superscript is simply + or - (the 1 is not included). If the magnitude of the charge is greater than 1, then the number is written before the + or -.