

Cations (Positive Ions)

Monoatomic

Polyatomic

Only One Ion Possible

More Than One Ion Possible

Rule:
Name of element + "ion"

Examples:

Na ⁺	sodium ion
Mg ²⁺	magnesium ion
H ⁺	hydrogen ion
K ⁺	potassium ion
Sr ²⁺	strontium ion
Cs ⁺	cesium ion
Ca ²⁺	calcium ion

Comment:

The number of positive charges is **NOT** indicated in the name because it is not necessary. These ions **NEVER** take on two possible positive charges.

Comment:

Hydrogen will take on a negative one charge (see monoatomic anions for naming).

Rule:
(a) newer rule - positive charges indicated by a Roman numeral

Examples:

Fe ²⁺	iron(II) ion
Fe ³⁺	iron(III) ion
Cu ⁺	copper(I) ion
Cu ²⁺	copper(II) ion

(b) older rule (but still used) - Latin stem + "ous" for the lesser charge. Latin stem + "ic" for the greater charge.

Examples:

Fe ²⁺	ferrous ion
Fe ³⁺	ferric ion
Cu ⁺	cuprous ion
Cu ²⁺	cupric ion
Sn ²⁺	stannous ion
Sn ⁴⁺	stannic ion

Rule: ??

Examples:

NH ₄ ⁺	ammonium
Hg ₂ ²⁺	mercury(I) ion or mercurous ion

Comment:

Hg₂²⁺ is two Hg⁺ ions bonded together, like this: Hg⁺—Hg⁺

However, Hg⁺ by itself does not exist, therefore mercury(I) ion is Hg₂²⁺

(Also, Hg₂²⁺ is mercury(II), but that is a monoatomic ion.)