

COMMON IONS

CATIONS

Monoatomic Ions

Col.1 (+1) Wants to lose 1 electron

H⁺¹ hydrogen
Li⁺¹ lithium
Na⁺¹ sodium
K⁺¹ potassium

Col.2 (+2) Wants to lose 2 electrons

Be⁺² beryllium
Mg⁺² magnesium
Ca⁺² calcium
Sr⁺² strontium
Ba⁺² barium

Col.13 (+3) Wants to lose 3 electrons

Al⁺³ aluminum

Transition Metals with Roman Numerals that denote

Charge:

Co ⁺² cobalt II	Co ⁺³ cobalt III
Cr ⁺² chromium II	Cr ⁺³ chromium III
Cu ⁺¹ copper I	Cu ⁺² copper II

Fe ⁺² iron II	Fe ⁺³ iron III
Pb ⁺² lead II	Pb ⁺⁴ lead IV
etc.	

✓ Ag⁺¹ silver

✓ Zn⁺² zinc

Hg₂⁺² mercury I Hg⁺² mercury II

Polyatomic Ions

✓ NH₄⁺¹ ammonium

Acids (usually start with H)

CH₃COOH or HC₂H₃O₂ acetic acid
(COOH)₂ or H₂C₂O₄ oxalic acid
H₂CO₃ carbonic acid

HCl hydrochloric acid
HClO₄ perchloric acid
HNO₃ nitric acid

H₂SO₄ sulfuric acid
H₃PO₄ phosphoric acid

ANIONS

Monoatomic Ions

(element names end in "ide", when 2nd name)

Col.17 (-1) Wants to gain 1 electron

F⁻¹ fluoride
Cl⁻¹ chloride
Br⁻¹ bromide
I⁻¹ iodide

Col.16 (-2) Wants to gain 2 electrons

O⁻² oxide
S⁻² sulfide
Se⁻² selenide

Col.15 (-3) Wants to gain 3 electrons

N⁻³ nitride
P⁻³ phosphide

Polyatomic Ions

CH₃COO⁻¹ or C₂H₃O₂⁻¹ acetate

C₂O₄⁻² oxalate

✓ CO₃⁻² **carbonate**

✓ ClO⁻¹ **hypochlorite**

✓ ClO₂⁻¹ **chlorite**

✓ ClO₃⁻¹ **chlorate**

✓ ClO₄⁻¹ **perchlorate**

✓ CN⁻¹ **cyanide**

✓ CrO₄⁻² **chromate**

✓ Cr₂O₇⁻² **dichromate**

✓ HCO₃⁻¹ **bicarbonate**

✓ HSO₄⁻¹ **bisulfate**

(or hydrogen carbonate & hydrogen sulfate)

✓ MnO₄⁻¹ **permanganate**

✓ NO₂⁻¹ **nitrite**

✓ NO₃⁻¹ **nitrate**

O₂⁻² peroxide (H₂O₂ hydrogen peroxide)

✓ OH⁻¹ **hydroxide**

✓ PO₄⁻³ **phosphate**

✓ SO₃⁻² **sulfite**

✓ SO₄⁻² **sulfate**