

Solubility of Common Inorganic Compounds in Water

(Low solubility = “insoluble”)

Negative Ions (anions)	+	Positive Ions (cations)	–	Compounds with the solubility
Essentially all		Alkali ions (Li ⁺ , Na ⁺ , K ⁺ , Rb ⁺ , Cs ⁺ , Fr ⁺)		Soluble
Essentially all		Hydrogen ions [H ⁺ _(aq)]		Soluble (ACIDS)
Essentially all		Ammonium ions (NH ₄ ⁺)		Soluble
Nitrate, NO ₃ ⁻		Essentially all		Soluble
Acetate, CH ₃ COO ⁻		Essentially all		Soluble
Chloride, Cl ⁻ Bromide, Br ⁻ Iodide, I ⁻		Ag ⁺ , Pb ⁺ , Hg ²⁺ , Cu ⁺ , Ti ⁺		Low solubility
		All others		Soluble
Sulfate, SO ₄ ²⁻		Ca ²⁺ , Sr ²⁺ , Ba ²⁺ , Pb ²⁺ , Ra ²⁺		Low solubility
		All others		Soluble
Sulfide, S ₂ ⁻		Alkali ions, H ⁺ _(aq) , NH ₄ ⁺ , Be ²⁺ , Mg ²⁺ , Ca ²⁺ , Sr ²⁺ , Ba ²⁺ , Ra ²⁺		Soluble
		All others		Low solubility
Hydroxide, OH ⁻		Alkali ions, H ⁺ _(aq) , NH ₄ ⁺ , Sr ²⁺ , Ba ²⁺ , Ra ²⁺ , Ti ⁺		Soluble
		All others		Low solubility
Phosphate, PO ₄ ³⁻ Carbonate, CO ₃ ²⁻ Sulfite, SO ₃ ²⁻		Alkali ions, H ⁺ _(aq) , NH ₄ ⁺		Soluble
		All others		Low solubility