

Solubility Rules for Ionic Compounds

All compounds containing alkali metal cations and the ammonium ion are soluble.

All compounds containing NO_3^- , ClO_4^- , ClO_3^- , and $\text{C}_2\text{H}_3\text{O}_2^-$ anions are soluble.

All chlorides, bromides, and iodides are soluble except those containing Ag^+ , Cu^+ , Pb^{2+} , or Hg_2^{2+} .

All sulfates are soluble except those containing Hg_2^{2+} , Pb^{2+} , Sr^{2+} , Ca^{2+} , or Ba^{2+} .

All hydroxides are insoluble except compounds of the alkali metals, Ca^{2+} , Sr^{2+} , and Ba^{2+} .

All compounds containing PO_4^{3-} , S^{2-} , CO_3^{2-} , and SO_3^{2-} ions are insoluble except those that also contain alkali metals or NH_4^+ .