

Solubility Rules for Ionic Compounds

1. An ionic compound is soluble in water if it contains one of the following ions: lithium ion, sodium ion, potassium ion, ammonium ion, or nitrate ion.
2. Most chloride, bromide, and iodide compounds are soluble. However, compounds of these ions with silver, mercury (I), and lead (II) are not soluble.
3. Most sulfate compounds are soluble. However, barium sulfate, lead (II) sulfate, and calcium sulfate are not soluble.
4. Most other compounds, including hydroxides, carbonates, sulfides, and phosphates are insoluble. (Unless the compound also contains sodium, potassium, lithium, or ammonium.)