

Solubility Rules

Soluble compounds include ionic compounds containing ...

1. ... alkali metal ions.
2. ... the ammonium ion.
3. ... chloride, bromide, or iodide ions **EXCEPT** when paired with Ag^+ , Pb^{2+} , or Hg_2^{2+} ions.
4. ... nitrate, acetate, or chlorate ions **EXCEPT** $\text{AgC}_2\text{H}_3\text{O}_2$.
5. ... the sulfate ion **EXCEPT** when paired with Pb^{2+} , Ca^{2+} , Sr^{2+} , Ba^{2+} , or Ra^{2+} ions.

Insoluble compounds include ionic compounds containing ...

6. ... the sulfide ion **EXCEPT** when paired with alkali metal, alkaline earth metal, or ammonium ions.
7. ... the hydroxide ion **EXCEPT** when paired with alkali metal, ammonium, or Sr^{2+} , or Ba^{2+} ions.
8. ... phosphate, carbonate, or sulfite ions **EXCEPT** when paired with alkali metal or ammonium ions.