

# Solubility Rules

- All compounds containing  $\text{NO}_3^-$ ,  $\text{C}_2\text{H}_3\text{O}_2^-$ ,  $\text{ClO}_3^-$  and  $\text{ClO}_4^-$  are **Soluble** (aq).
- All compounds containing an alkali metal cation\* or  $\text{NH}_4^+$  are **Soluble** (aq).
- All compounds containing  $\text{Cl}^-$ ,  $\text{Br}^-$  and  $\text{I}^-$  are **Soluble** (aq) except those containing  $\text{Ag}^+$ ,  $\text{Hg}_2^{2+}$ ,  $\text{Pb}^{2+}$  and  $\text{Cu}^+$ .
- All compounds containing  $\text{OH}^-$  and  $\text{S}^{2-}$  are **Insoluble** (s) except those containing an alkali metal cation\*,  $\text{NH}_4^+$ ,  $\text{Ca}^{2+}$ ,  $\text{Sr}^{2+}$  and  $\text{Ba}^{2+}$ .
- All compounds containing  $\text{CO}_3^{2-}$  and  $\text{PO}_4^{3-}$  are **Insoluble** (s) except those containing an alkali metal cation\* and  $\text{NH}_4^+$ .
- All compounds containing  $\text{SO}_4^{2-}$  are **Soluble** (aq) except those containing  $\text{Sr}^{2+}$ ,  $\text{Ba}^{2+}$ ,  $\text{Ag}^+$ ,  $\text{Hg}_2^{2+}$  and  $\text{Pb}^{2+}$ .

\*Alkali metal cations are  $\text{Li}^+$ ,  $\text{Na}^+$ ,  $\text{K}^+$ ,  $\text{Rb}^+$ , and  $\text{Cs}^+$