

Solubility Rules from Table 11.3 on p. 344 of textbook

1. All group 1, and ammonium ( $\text{NH}_4^+$ ) compounds are soluble.
2. All nitrate ( $\text{NO}_3^-$ ), chlorate ( $\text{ClO}_3^-$ ), and acetate ( $\text{CH}_3\text{COO}^-$ , except  $\text{Ag}^+$ ) compounds are soluble.
3. Most sulfate ( $\text{SO}_4^{2-}$ ) compounds are soluble, except  $\text{Pb}^{2+}$ ,  $\text{Ag}^+$ ,  $\text{Hg}_2^{2+}$ ,  $\text{Ca}^{2+}$ ,  $\text{Ba}^{2+}$ ,  $\text{Sr}^{2+}$
4. Most halide ( $\text{F}^-$ ,  $\text{Cl}^-$ ,  $\text{Br}^-$ ,  $\text{I}^-$ ) compounds are soluble, except some heavy metal compounds ( $\text{Pb}^{2+}$ ,  $\text{Ag}^+$ ,  $\text{Hg}_2^{2+}$ )
5. Most  $\text{CO}_3^{2-}$ ,  $\text{PO}_4^{3-}$ ,  $\text{CrO}_4^{2-}$ ,  $\text{S}^{2-}$ ,  $\text{O}^{2-}$ ,  $\text{OH}^-$  are insoluble.