

**TABLE 9.2**

## Solubility Guidelines: Soluble Compounds

<b>Water-soluble compounds</b>	<b>Insoluble exceptions</b>
Compounds containing an alkali metal cation ( $\text{Li}^+$ , $\text{Na}^+$ , $\text{K}^+$ , $\text{Rb}^+$ , $\text{Cs}^+$ ) or the ammonium ion ( $\text{NH}_4^+$ )	
Compounds containing the nitrate ion ( $\text{NO}_3^-$ ), acetate ion ( $\text{C}_2\text{H}_3\text{O}_2^-$ ), or chlorate ion ( $\text{ClO}_3^-$ )	
Compounds containing the chloride ion ( $\text{Cl}^-$ ), bromide ion ( $\text{Br}^-$ ), or iodide ion ( $\text{I}^-$ )	Compounds containing $\text{Ag}^+$ , $\text{Hg}_2^{2+}$ , or $\text{Pb}^{2+}$
Compounds containing the sulfate ion ( $\text{SO}_4^{2-}$ )	Compounds containing $\text{Ag}^+$ , $\text{Hg}_2^{2+}$ , $\text{Pb}^{2+}$ , $\text{Ca}^{2+}$ , $\text{Sr}^{2+}$ , or $\text{Ba}^{2+}$

**TABLE 9.3**

## Solubility Guidelines: Insoluble Compounds

<b>Water-insoluble compounds</b>	<b>Soluble exceptions</b>
Compounds containing the carbonate ion ( $\text{CO}_3^{2-}$ ), phosphate ion ( $\text{PO}_4^{3-}$ ), chromate ion ( $\text{CrO}_4^{2-}$ ), or sulfide ion ( $\text{S}^{2-}$ )	Compounds containing $\text{Li}^+$ , $\text{Na}^+$ , $\text{K}^+$ , $\text{Rb}^+$ , $\text{Cs}^+$ , or $\text{NH}_4^+$
Compounds containing the hydroxide ion ( $\text{OH}^-$ )	Compounds containing $\text{Li}^+$ , $\text{Na}^+$ , $\text{K}^+$ , $\text{Rb}^+$ , $\text{Cs}^+$ , or $\text{Ba}^{2+}$