

# Chemistry

## Solubility Table

<u>Ion</u>	<u>Solubility</u>	<u>Exceptions</u>
$\text{NO}_3^-$	soluble	none
$\text{ClO}_4^-$	soluble	none
$\text{Cl}^-$	soluble	except $\text{Ag}^+$ , $\text{Hg}_2^{2+}$ , $\text{Pb}^{2+}$
$\text{I}^-$	soluble	except $\text{Ag}^+$ , $\text{Hg}_2^{2+}$ , $\text{Pb}^{2+}$
$\text{SO}_4^{2-}$	soluble	except $\text{Ca}^{2+}$ , $\text{Ba}^{2+}$ , $\text{Sr}^{2+}$ , $\text{Hg}^{2+}$ , $\text{Pb}^{2+}$ , $\text{Ag}^+$
$\text{CO}_3^{2-}$	insoluble	except Group IA and $\text{NH}_4^+$
$\text{PO}_4^{3-}$	insoluble	except Group IA and $\text{NH}_4^+$
$\text{-OH}$	insoluble	except Group IA, $\text{Ca}^{2+}$ , $\text{Ba}^{2+}$ , $\text{Sr}^{2+}$
$\text{S}^{2-}$	insoluble	except Group IA, IIA and $\text{NH}_4^+$
$\text{Na}^+$	soluble	none
$\text{NH}_4^+$	soluble	none
$\text{K}^+$	soluble	none

\*slightly soluble

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<b>Compounds Containing the Following Ions are Generally Soluble</b>	<b>Exceptions</b> (when combined with ions on the left, the compound is insoluble)
$\text{Li}^+$ , $\text{Na}^+$ , $\text{K}^+$ , $\text{NH}_4^+$	none
$\text{NO}_3^-$ , $\text{C}_2\text{H}_3\text{O}_2^-$	none
$\text{Cl}^-$ , $\text{Br}^-$ , $\text{I}^-$	$\text{Ag}^+$ , $\text{Hg}_2^{2+}$ , $\text{Pb}^{2+}$
$\text{SO}_4^{2-}$	$\text{Ag}^+$ , $\text{Ca}^{2+}$ , $\text{Sr}^{2+}$ , $\text{Ba}^{2+}$ , $\text{Pb}^{2+}$

<b>Compounds Containing the Following Ions are Generally Insoluble</b>	<b>Exceptions</b> (when combined with ions on the left the compound is soluble or <b>slightly soluble</b> )
$\text{OH}^-$	$\text{Li}^+$ , $\text{Na}^+$ , $\text{K}^+$ , $\text{NH}_4^+$ , $\text{Ca}^{2+}$ , $\text{Sr}^{2+}$ , $\text{Ba}^{2+}$
$\text{S}^{2-}$	$\text{Li}^+$ , $\text{Na}^+$ , $\text{K}^+$ , $\text{NH}_4^+$
$\text{CO}_3^{2-}$ , $\text{PO}_4^{3-}$	$\text{Li}^+$ , $\text{Na}^+$ , $\text{K}^+$ , $\text{NH}_4^+$