

# Solubility of Some Ionic Compounds in Water

## Always Soluble

Alkali metals =	$\text{Li}^+$ , $\text{Na}^+$ , $\text{K}^+$ , $\text{Rb}^+$ , $\text{Cs}^+$	
Ammonium =	$\text{NH}_4^+$	AAA
Acetate =	$\text{C}_2\text{H}_3\text{O}_2^-$	CNP
Chlorate =	$\text{ClO}_3^-$	
Nitrate =	$\text{NO}_3^-$	
Perchlorate =	$\text{ClO}_4^-$	

## Generally Soluble

$\text{Cl}^-$ , $\text{Br}^-$ , $\text{I}^-$	Soluble <u>except</u> : $\text{Ag}^+$ , $\text{Pb}^{2+}$ , $\text{Hg}_2^{2+}$	AP-H
$\text{F}^-$	Soluble <u>except</u> : $\text{Ca}^{2+}$ , $\text{Ba}^{2+}$ , $\text{Sr}^{2+}$ , $\text{Pb}^{2+}$ , $\text{Mg}^{2+}$	CBS-PM
Sulfate = $\text{SO}_4^{2-}$	Soluble <u>except</u> : $\text{Ca}^{2+}$ , $\text{Ba}^{2+}$ , $\text{Sr}^{2+}$ , $\text{Pb}^{2+}$	CBS-P

## Generally Insoluble

$\text{O}^{2-}$ , $\text{OH}^-$	Insoluble <u>except</u> : Alkali metals and $\text{NH}_4^+$	AA
	<u>Somewhat</u> soluble: $\text{Ca}^{2+}$ , $\text{Ba}^{2+}$ , $\text{Sr}^{2+}$	CBS
$\text{CO}_3^{2-}$ , $\text{CO}_3^{2-}$		
$\text{S}^{2-}$ , $\text{SO}_3^{2-}$	Insoluble <u>except</u> : Alkali metals and $\text{NH}_4^+$	AA
$\text{PO}_4^{3-}$		
$\text{CrO}_4^{2-}$ , $\text{Cr}_2\text{O}_4^{2-}$		

**Not Soluble** = forms precipitate

**Soluble** = dissolves in water (aqueous)