

### Solubility Chart:

Combination of cations with anions either produce no precipitate, (i.e. the ions do not combine in solution) or they form a precipitate, leaving less than 1% of the ions in solution. Soluble combinations are labeled **(aq)**; insoluble combinations are labeled **(s)**. Some combinations form gases or undergo complex reactions, these are labeled **d**, indicating decomposition. Spaces labeled **----** indicate no reference was found.

	$C_2H_3O_2^-$	$AsO_4^{3-}$	$Br^-$	$CO_3^{2-}$	$Cl^-$	$CrO_4^{2-}$	$OH^-$	$I^-$	$NO_3^-$	$C_2O_4^{2-}$	$O^{2-}$	$PO_4^{3-}$	$SO_4^{2-}$	$S^{2-}$	$SO_3^{2-}$
Group I & $NH_4^+$	(aq)	(aq)	(aq)	(aq)	(aq)	(aq)	(aq)	(aq)	(aq)	(aq)	(aq)	(aq)	(aq)	(aq)	(aq)
$Al^{3+}$	(aq)	(s)	(aq)	----	(aq)	----	(s)	(aq)	(aq)	----	(s)	(s)	(aq)	d	----
$Ba^{2+}$	(aq)	(s)	(aq)	(s)	(aq)	(s)	(aq)	(aq)	(aq)	(s)	(aq)	(s)	(s)	d	(s)
$Bi^{3+}$	-----	(aq)	d	(s)	d	-----	(s)	(s)	d	(s)	(s)	(aq)	d	(s)	-----
$Ca^{2+}$	(aq)	(s)	(aq)	(s)	(aq)	(aq)	(s)	(aq)	(aq)	(s)	(s)	(s)	(s)	d	(s)
$Co^{2+}$ , $Ni^{2+}$ and $Cu^{2+}$	(aq)	(s)	(aq)	(s)	(aq)	(s)	(s)	(aq)	(aq)	(s)	(s)	(s)	(aq)	(s)	(s)
$Fe^{2+}$	(aq)	(s)	(aq)	(s)	(aq)	----	(s)	(aq)	(aq)	(s)	(s)	(s)	(aq)	(s)	(s)
$Fe^{3+}$	(s)	(s)	(aq)	----	(aq)	----	(s)	-----	(aq)	(aq)	(s)	(s)	(aq)	(s)	-----
$Pb^{2+}$	(aq)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(aq)	(s)	(s)	(s)	(s)	(s)	(s)
$Mg^{2+}$	(aq)	d	(aq)	(s)	(aq)	(aq)	(s)	(aq)	(aq)	(s)	(s)	(s)	(aq)	d	(aq)
$Hg^{2+}$	(aq)	(s)	(s)	(s)	(aq)	(aq)	(s)	(s)	(aq)	(s)	(s)	(s)	d	(s)	----
$Ag^+$	(aq)	(s)	(s)	(s)	(s)	(s)	(s)	(s)	(aq)	(s)	(s)	(s)	(s)	(s)	(s)
$Zn^{2+}$	(aq)	(s)	(aq)	(s)	(aq)	(s)	(s)	(aq)	(aq)	(s)	(s)	(s)	(aq)	(s)	(s)

It is useful to remember that all compounds containing Group I A ions are soluble. Also, all compounds containing the ammonium ion or the nitrate ion are soluble.