

## SOLUBILITY RULES FOR IONIC COMPOUNDS IN WATER

SOLUBLE IONIC COMPOUNDS	INSOLUBLE IONIC COMPOUNDS
<ol style="list-style-type: none"> <li>1. All common compounds of group IA ions (<math>\text{Na}^+</math>, <math>\text{K}^+</math>, etc.) and ammonium ions (<math>\text{NH}_4^+</math>) are soluble.</li> <li>2. All common nitrates (<math>\text{NO}_3^-</math>), acetates (<math>\text{CH}_3\text{CO}_2^-</math>), and most perchlorates (<math>\text{ClO}_4^-</math>) are soluble.</li> <li>3. All common chlorides (<math>\text{Cl}^-</math>), bromides (<math>\text{Br}^-</math>), and iodides (<math>\text{I}^-</math>) are soluble, except those of <math>\text{Ag}^+</math>, <math>\text{Pb}^{2+}</math>, <math>\text{Cu}^+</math> and <math>\text{Hg}_2^{2+}</math>.</li> <li>4. All common sulfates (<math>\text{SO}_4^{2-}</math>) are soluble, except those of <math>\text{Ca}^{2+}</math>, <math>\text{Sr}^{2+}</math>, <math>\text{Ba}^{2+}</math>, <math>\text{Pb}^{2+}</math>.</li> </ol>	<ol style="list-style-type: none"> <li>1. All common metal hydroxides are insoluble, except those of Group IA and the larger members of Group 2A (beginning with <math>\text{Ca}^{2+}</math>).</li> <li>2. All common carbonates (<math>\text{CO}_3^{2-}</math>) and phosphates (<math>\text{PO}_4^{3-}</math>) are insoluble, except those of Group IA and <math>\text{NH}_4^+</math>.</li> <li>3. All common sulfides are insoluble, except those of Group IA, Group 2A and <math>\text{NH}_4^+</math>.</li> </ol>

### ACTIVITY SERIES OF SOME METALS

