## **General Solubility Rules**

	All Group I (1) elements and $\mathrm{NH_4}^+$ are soluble
NO <sub>3</sub> <sup>-</sup> CIO <sub>3</sub> <sup>-</sup> CIO <sub>4</sub> <sup>-</sup> C <sub>2</sub> H <sub>3</sub> O <sub>2</sub> <sup>-</sup>	All Nitrates, Chlorates, Perchlorates and Acetates are soluble
Cl <sup>-</sup> Br <sup>-</sup> I <sup>-</sup>	All Halides are soluble <b>EXCEPT</b> Ag <sup>+</sup> , Hg <sub>2</sub> <sup>2+</sup> , and Pb <sup>2+</sup>
SO <sub>4</sub> <sup>2-</sup>	All Sulfates are soluble <b>EXCEPT</b> Sr <sup>2+</sup> , Ba <sup>2+</sup> , and Pb <sup>2+</sup>

CO <sub>3</sub> <sup>2-</sup> PO <sub>4</sub> <sup>3-</sup> C <sub>2</sub> O <sub>4</sub> <sup>2-</sup> CrO <sub>4</sub> <sup>2-</sup>	All Carbonates, Phosphates, Oxalates, and Chromates are insoluble <b>EXCEPT</b> : Group I (1) elements and NH <sub>4</sub> <sup>+</sup>
OH <sup>-</sup> O <sup>2-</sup>	All Hydroxides and Oxides are insoluble <b>EXCEPT</b> Group I (1) elements, NH <sub>4</sub> <sup>+</sup> , Sr <sup>2+</sup> , and Ba <sup>2+</sup> . (Ca <sup>2+</sup> slightly soluble)
S <sup>2-</sup>	All Sulfides are insoluble <b>EXCEPT</b> : Group I (1) and Group II (2) elements and $NH_4^+$ .

 $<sup>\</sup>ensuremath{^{*}}$  Insoluble compounds are those that precipitate when we mx equal volumes of 0.1M solutions of the corresponding ions.