

Approximate solubilities of ionic compounds

Solubility of ionic compounds in water

Compound type	Well soluble	Poorly soluble	Insoluble
alkali metal salts (Li^+ , K^+ , Na^+) and ammonium salts (NH_4^+)	other	KClO_4	none
perchlorates (ClO_4^-), chlorates (ClO_3^-), nitrates (NO_3^-), acetates (CH_3COO^-)	other	KClO_4 , CH_3COOAg	none
chlorides (Cl^-), bromides (Br^-), iodides (I^-)	other	PbCl_2 , PbBr_2	Cu^+ , Ag^+ , Hg_2^{2+} , Hg_2^{2+} , Bi^{3+} , Pb^{2+}
sulfates (SO_4^{2-})	other	Ca^{2+} , Ag^+	Sr^{2+} , Ba^{2+} , Pb^{2+}
hydroxides (OH^-)	alkali metals and alkaline earths	Ca^{2+}	other
carbonates (CO_3^{2-}), phosphates (PO_4^{3-}), arsenates (AsO_4^{3-})	alkali metals, NH_4^+	MgCO_3	other
sulfides (S^{2-})	ions with an inert gas structure (alkali metals, alkaline earths, NH_4^+ , Al^{3+} , etc.)		other
oxides (O^{2-})	alkali metals, Ca^{2+} , Ba^{2+} , Sr^{2+}		other

In general, salts of weak acids are soluble in solutions of strong acids, forming weak acids from them. Analogously, salts of weak bases are soluble in solutions of strong bases, forming weak bases from them. Compounds that contain hydrogen anions in the molecule are more soluble.

Links

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- Solubility product
- Solubility products of ionic compounds