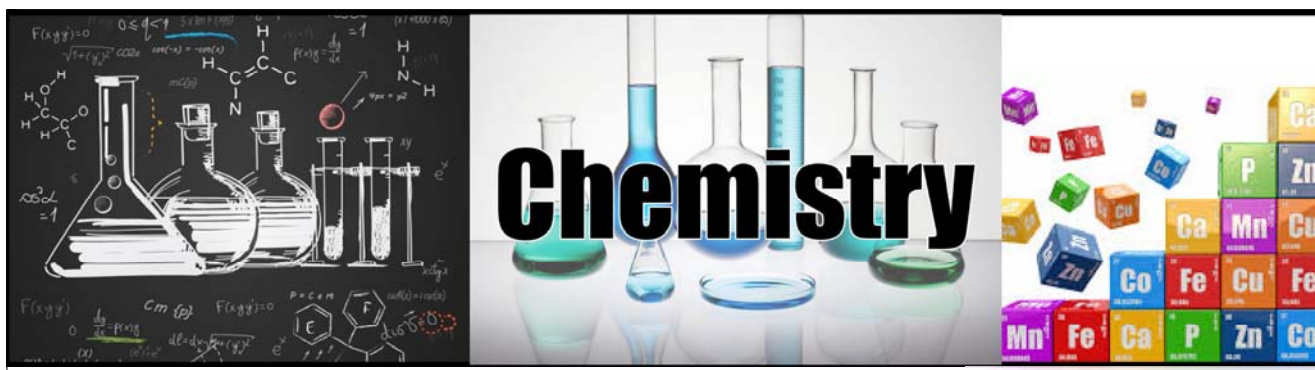


Lesson 8 Solubility Table.notebook



Lesson 8: Solubility Table

Using the table on p. 10 of your data booklet. Determine if the following are soluble (aq) or slightly soluble (s).

Solubility of Some Common Ionic Compounds in Water

- Note: Group 1 = Li^+ , Na^+ , K^+ , Rb^+ , Cs^+ , Fr^+
- Group 2 = Be^{2+} , Mg^{2+} , Ca^{2+} , Sr^{2+} , Ba^{2+} , Ra^{2+}

- “all” means “all compounds containing these ions”
- “most” means “most compounds containing these ions”
- “only with” means “only compounds containing” the ion or ions listed

Solubility of Selected Ionic Compounds in Aqueous Solutions at 25°C

NaCl (aq)

Ion	Group 1 ions NH_4^+ NO_3^- ClO_3^- ClO_4^- CH_3COO^-	F^-	Cl^- Br^- I^-	SO_4^{2-}	CO_3^{2-} PO_4^{3-} SO_3^{2-}	IO_3^- $\text{OOC}^-\text{COO}^{2-}$	OH^-
Solubility greater than or equal to 0.1 mol/L (very soluble) (aq)	most	most	most	most	Group 1 ions NH_4^+	Group 1 ions NH_4^+ $\text{Co}(\text{IO}_3)_2$ $\text{Fe}_2(\text{OOC}^-\text{COO})_3$	Group 1 ions NH_4^+
Solubility less than 0.1 mol/L (slightly soluble) (s)	RbClO_4 CsClO_4 AgCH_3COO	Li^+ Mg^{2+} Ca^{2+} Sr^{2+} Ba^{2+} Fe^{2+} Pb^{2+}	Cu^+ Ag^+ Pb^{2+} Tl^+	Ca^{2+} Sr^{2+} Ba^{2+} Ag^+ Pb^{2+} Ra^{2+}	most	most	most

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Ex.) Determine the solubility of the following compounds:

Formula	Solubility
NaCl	(aq) very soluble
²⁺ PbCl ₂	(s) slightly soluble
⁴⁺ PbCl ₄	(aq)
BaSO ₄	(s)
Cr ₂ S ₃	(s)
CsCH ₃ COO	(aq)
K ₂ CO ₃	(aq)

* Group 1 ion

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