

Chem12 Common Ion Effect : W.S.-110

1) Given the solubility equilibrium, $AB(s) \rightleftharpoons A^+(aq) + B^-(aq)$;

a) Explain how to increase the solubility of $AB(s)$. Assume T is constant. (Hint : Use Le Chatelier's Principle)

b) Explain how to decrease the solubility of $AB(s)$.

2) Name a substance that can decrease the solubility of KCl .

3) Name any substance that can increase the solubility of $Sr(OH)_2$.

Answers : 1)a) The shift will be right if we remove A^+ or B^- ions., b) Add A^+ or B^- ions. , 2) $KCl(s) \rightleftharpoons K^+(aq) + Cl^-(aq)$, add K^+ or Cl^- ions, e.g. add KNO_3 or $NaCl$ (both are soluble, Na^+ and NO_3^- are spectator ions). 3) $Sr(OH)_2(s) \rightleftharpoons Sr^{2+}(aq) + 2OH^-(aq)$.,. Remove Sr^{2+} or OH^- ions, e.g. add $BaCl_2$ (Ba^{2+} removes OH^- ions) or Na_2SO_4 , (SO_4^{2-} removes Sr^{2+} ions).