Solubility Product.

- In sparingly soluble salts.

$$AgCl_{s}(s) \rightleftharpoons Ag^{+}_{s} + Cl^{-}_{s} \quad \text{mol/lit.}$$

$$K_{sp} = [Ag^+][Cl^-] = s \cdot s = s^2$$

$$\boxed{s = \sqrt{K_{sp}}}$$

K_{sp} = solubility product.

s = solubility of AgCl.

In ionic product,

If Ionic product = K_{sp} → the solution will be saturated

If $I.P > K_{sp}$ → it will be supersaturated solution (ppt. occur).

If $I.P < K_{sp}$ → it will be unsaturated soln (a ppt. will not formed).