

# Chapter 15 — Precipitation Equilibrium

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- Example Decomposition:  $\text{NaCl(s)} \rightleftharpoons \text{Na}^+(\text{s}) + \text{Cl}^-(\text{s})$

1.  $K_{sp} = [\text{Na}^+][\text{Cl}^-]$

- Solutions can only hold a set number of ions, over that solid forms
- Ion Product (P) — Concentration not necessarily at equilibrium

1.  $P > K_{sp}$  then there is solid
2.  $P < K_{sp}$  then there is no solid
3.  $P = K_{sp}$  then there is no solid and it is at equilibrium