# IONIC PRODUCT VERSUS SOLUBILITY PRODUCT

(i) When the ionic product of a salt in a solution matches its solubility product, the solution reaches a saturated state. In this equilibrium condition, the undissociated salt coexists with its ions in the solution, maintaining a delicate balance.

(ii) If the ionic product of a salt in a solution is less than its solubility product, the solution is deemed unsaturated. In such instances, the solution exclusively comprises ions, with no undissociated salt present.

(iii) Conversely, when the ionic product surpasses the solubility product, the surplus ions within the solution undergo precipitation. This precipitation phenomenon signifies the separation of excess ions from the solution, leading to the formation of solid precipitates.