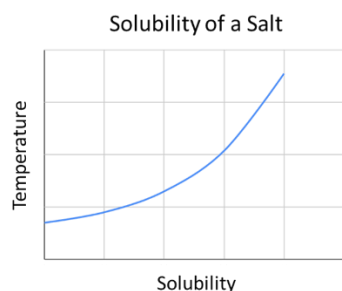


Solubility: Effect of Temperature

Example One



The solubility for a salt as a function of temperature is shown on the graph above. Based on the data, is the dissolving process for this salt exothermic or endothermic?

Example Two

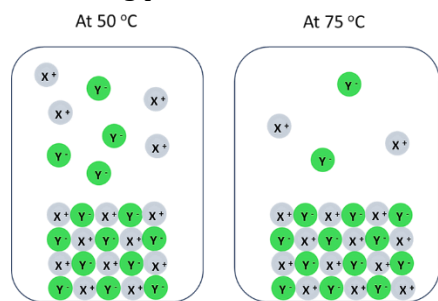
The dissolution process for calcium oxide is exothermic. In order to increase the solubility of calcium oxide in solution, should the temperature of the solution be raised or lowered?

Example Three

The K_{sp} value for a slightly soluble salt increases when the temperature is raised. Is the dissolving process exothermic or endothermic for this salt?

Example Four

The contents of a 1.00 L flask were measured at two different temperatures. The diagrams below show the relative amounts a slightly soluble salt within the container at each temperature. Use the diagrams to determine whether the K_{sp} value of this salt increases as the solution is heated. Is the dissolving process for this salt, exothermic or endothermic?



Solution: