

## **Answer on Question #45375 – Chemistry – Physical Chemistry**

Question:

How can we add more solute to a saturated solution, other than increasing the temperature?

**Answer:**

If the solute is a gas we can use pressure to increase its solubility in a saturated solution. As the partial pressure of a gas in the atmosphere above the surface of the solution increases, the solubility of that gas increases.

For example, a carbonated beverage is bottled and capped under a high partial pressure of carbon dioxide so that a great deal of carbon dioxide dissolves. When the bottle is uncapped, the partial pressure of carbon dioxide above the liquid drops to that in the atmosphere, the solubility of carbon dioxide decreases, and the gaseous  $\text{CO}_2$  comes out of solution as fine bubbles.

If the solute is solid or liquid there is no other way to add more solute to a saturated solution except the increasing the temperature.