

Common Ion Effect

- 1.) A new kettle was used to make tea using "temporarily hard" water. After a few weeks there was a thin layer of white scale on the inside of the kettle. Suggest the chemical formula for the kettle scale.
- 2.) Is it possible to distinguish between temporarily hard and permanently hard water by adding washing soda and seeing if a precipitate forms?
- 3.) Cities whose water supply has temporarily hard water often have problems with the hot water pipes in homes becoming clogged and having decreased water flow. Why might this be?
- 4.) The solubility of $\text{Sr}(\text{OH})_2$ is about 0.5 M at 25°C. What are two ways you could increase the solubility and decreasing the solubility in water.
Answer - Increase Decrease
 - 1.)
 - 2.)
- 5.) A metal plate had an unwanted coating of CaCO_3 (s). How might you dissolve this coating?
- 6.) In which solution would SrCl_2 (s) be the most soluble? In which would it be least soluble? Explain.