**Solubility with change in pH**

**2018**

Explain the effect on the solubility of iron(III) hydroxide, Fe(OH)3, in water if the pH is lowered below 4

Include relevant equation(s) in your answer. No calculations are necessary.

**2017**

Explain why the solubility of Cu(OH)2 increases when dilute hydrochloric acid is added.

**2016**

Explain how the solubility of Ag2CO3 will change if added to 50 mL of a 1.00 mol L–1 ammonia, NH3,

solution. Support your answer with balanced equations.

**2015**

Some marine animals use calcium carbonate to form their shells. Increased acidification of the oceans poses

a problem for the survival of these marine animals.

Explain why the solubility of CaCO3 is higher in an acidic solution.

Use an equation to support your explanation.

**2014**

The solubility of zinc hydroxide, Zn(OH)2, can be altered by changes in pH. Some changes in pH may lead

to the formation of complex ions, such as the zincate ion, [Zn(OH)4]2–.

Use equilibrium principles to explain why the solubility of zinc hydroxide increases when the pH is less

than 4 or greater than 10.

*No calculations are necessary.*

**2012**

Discuss the effect of decreasing the pH of the water on the solubility of Fe(OH)3.

**2011**

A saturated solution of zinc hydroxide, Zn(OH)2, contains a small amount of solid Zn(OH)2 at the bottom

of the container. The pH of the solution is increased. Discuss the effect of increasing the pH on the amount

of solid present, and also on the nature and concentration of the species present in the solution.

*No calculations are necessary.*

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