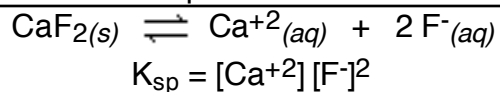


+ WS 10.1 Solubility Product

K_{sp} is called the solubility product constant. It is the product of the concentrations of a substances' ions in a saturated solution, each raised to the power of the coefficient.



Remember, pure solids and liquids are not included in equilibrium expressions.

The numerical value for K_{sp} can be determined from solubility data (see reference chart).

Calculate the value for K_{sp} for the following:

1. $\text{Mg}(\text{OH})_2$ at $100\text{ }^\circ\text{C}$

2. $\text{AgC}_2\text{H}_3\text{O}_2$ at $0\text{ }^\circ\text{C}$

3. PbCl_2 at $0\text{ }^\circ\text{C}$

4. PbCl_2 at $20\text{ }^\circ\text{C}$

K_{sp} values can be looked up in charts (see reference chart) and be used to determine solubility data.

Calculate the solubility of each salt @ $25\text{ }^\circ\text{C}$, in g/L:

5. BaCO_3

6. ZnS

7. Ag_2S

8. $\text{Fe}(\text{OH})_2$

Ans (IRO+2): 0.014, 1.9E-3, 1.9E-4, 5.2E-4, 1.4E-5, 4.6E-5, 5.6E-5, 2.5E-8, 1.3E-9, 8.4E-9, 1.3E-10,
3.2E-10, 6.2E-15