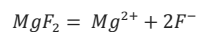


Question #79014, Chemistry / General Chemistry

the ksp for magnesium fluoride is 5.2×10^{-11} calculate the solubility of the salt in moles per liter and grams per liter.

Solution

$$KSP (MgF_2) = 5.2 * 10^{-11}$$



x - is a solubility of the salt solubility in moles per liter

$$KSP (MgF_2) = x * 2x * 2x = 4x^3$$

$$x = (5.2 * 10^{-11})^{1/3} = 0.000373 \text{ mole/l}$$

$$M(MgF_2) = 62 \text{ g/mole}$$

$$\text{solubility of the salt in grams per liter} = 0.000373 * 62 = 0.023126 \text{ g/l}$$