Marks 9

- The salt calcium oxalate, $CaC_2O_4 \cdot H_2O$, is sparingly soluble. Write down the chemical equation for its dissolution in water and the expression for K_{sp}.

What is the molar solubility of calcium oxalate? $K_{sp} = 2.3 \times 10^{-9}$

Answer:

If additional calcium oxalate is added to a saturated solution, what is the effect on $[Ca^{2+}(aq)]$?

Following blood donation, a solution of sodium oxalate is added to remove $Ca^{2+}(aq)$ ions which cause the blood to clot. The concentration of $Ca^{2+}(aq)$ ions in blood is 9.7×10^{-5} g mL^{-1}. If 100.0 mL of 0.1550 M $Na_2C_2O_4$ is added to 100.0 mL of blood, what will be the concentration (in mol L^{-1}) of Ca^{2+} ions remaining in the blood?

Answer: