20.5 Determining if a Precipitate forms (The Ion Product) (Video)

This project was preformed to supply **Libretext Authors** with videos on General Chemistry topics which can be used to enhance their projects. Also, these videos are meant to act as a learning resource for **all General Chemistry students**.

Video Topics

We are interested in knowing if a precipitate forms if we mix two solutions that contain both of the common ions of an insoluble salt.

To find this out we find $Q_{sp,}$ which is also called the ion product.

$\mathbf{AB_{(s)} \Leftrightarrow A^{+}_{(aq)} + B^{-}_{(aq)}}$

Q_{sp} is the non-equilibrium concentration of the insoluble salt's ion plugged into the solubility product.

If $\mathbf{Q_{sp} > K_{sp}}$, The solution is supersaturated, the equilibrium must shift left and form a precipitate to reach equilibrium.

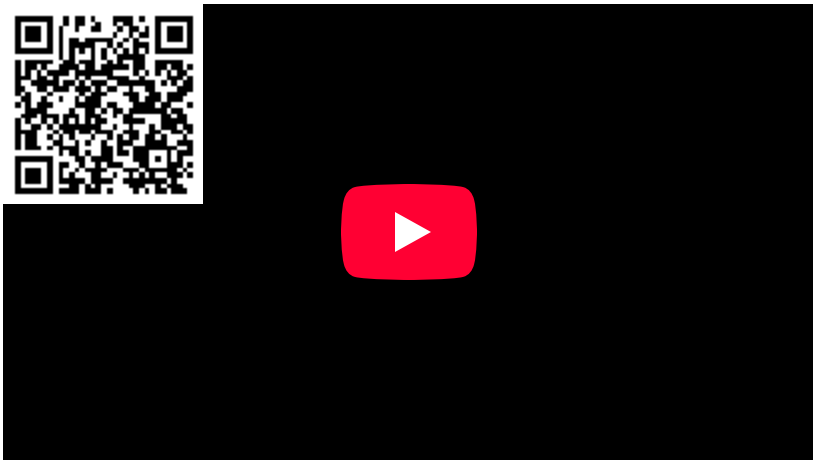
If $\mathbf{Q_{sp} < K_{sp}}$ The solution is unsaturated and no precipitate forms.

If $\mathbf{Q_{sp} = K_{sp}}$ the solution is saturated.

This video contains examples of determining if a precipitate will form through the calculation of Q_{sp}.

Link to Video

Determining if a Precipitate forms (The Ion Product): https://youtu.be/Naf7PoHPz8Y



Attribution

- Prof. Steven Farmer (Sonoma State University)