

18.3 Self-Ionization of Water (K_w) (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

This video discusses how water is involved in acid and base equilibria. Also, the equilibrium for the **self-ionization of water (K_w)**

Substances (H₂O) that can act as an acid or base are called amphiprotic

In all Acid/Base reactions water is present.

Because water is amphiprotic it can break up into hydronium and hydroxide ions.

Self-ionization:

$$K_w = \{H_3O^+\} \{OH^-\} = 1.0 \times 10^{-14} @ 25^\circ C$$

K_w = ion product of water.

In pure water

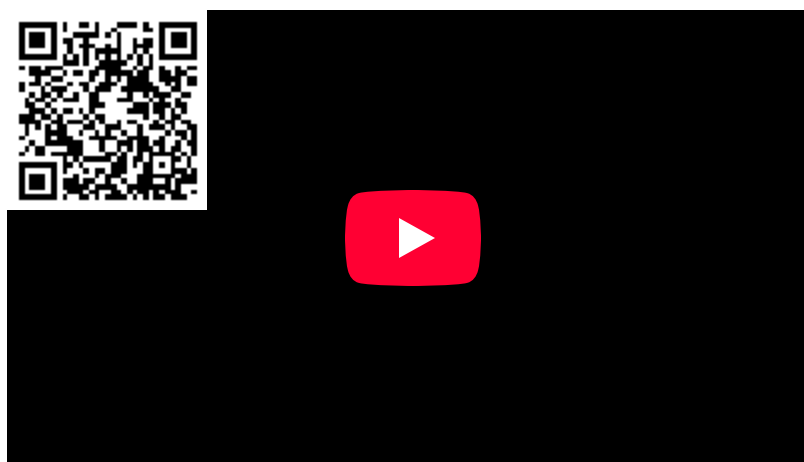
$$\{H_3O^+\} = \{OH^-\} = 1.0 \times 10^{-7} M$$

This is the requirement of neutrality.

H₃O⁺ and OH⁻ are always in Eq. with each other.

Link to Video

Self-Ionization of Water (K_w): <https://youtu.be/RMpO0rqUnFg>



Attribution

- Prof. Steven Farmer ([Sonoma State University](#))

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