

## 18.15 pH Indicators (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 pH indicator and how they are used.

Indicators are usually weak acids

The acid and its conjugate base have different colors



By le Chatelier's principal

Adding  $\text{H}^+$  shifts the equilibrium to the left. The acid color appears.

Adding  $\text{OH}^-$  reduces  $\text{H}_3\text{O}^+$  and the equilibrium shifts right. The base color appears.

When  $\{\text{HIn}\} = \{\text{In}^-\}$  and intermediate color appears.

This occurs when  $\text{pH} = \text{pKa}$ .

The color change occurs of a range of  $\text{pH} = \text{pKa} \pm 1$

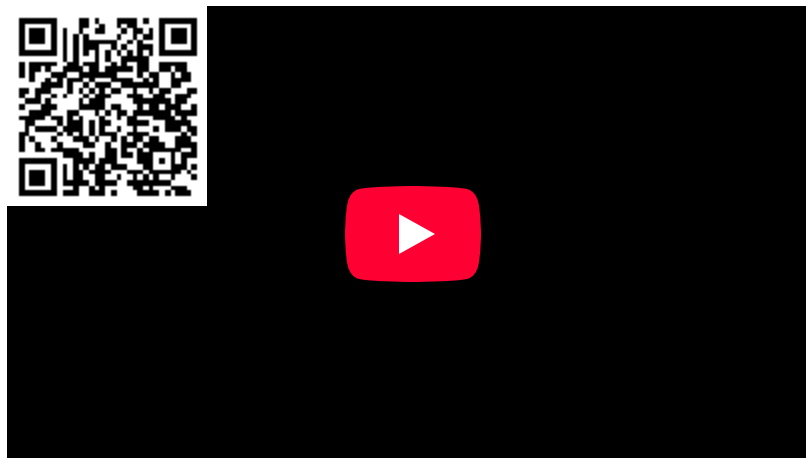
Acid color  $\text{pH} < \text{pKa} - 1$

Intermediate color  $\text{pH} = \text{pKa}$

Base color  $\text{pH} > \text{pKa} + 1$

### Link to Video

**pH Indicators:** <https://youtu.be/1IqzUa5lABs>



### Attribution

- Prof. Steven Farmer (Sonoma State University)

18.15 pH Indicators (Video) is shared under a [not declared](#) license and was authored, remixed, and/or curated by LibreTexts.