

Edible Enzyme Essentials: Learning the Properties of Enzyme Function Through Cheese Making (and Eating)

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Spectrophotometry is often used in biology to explore enzyme properties. While this provides quantitative data for graphing, if the primary goal is to have students understand the roles of temperature, pH, concentration, and substrate in enzyme function, the technical aspects of spectrophotometry can cause students to miss important points. The practical application of cheesemaking offers a qualitative approach to exploring enzyme properties that aids student conceptual understanding and can be completed in two hours. Students experiment with temperature, pH, enzyme concentration, and substrate type, and are able to see the practical results of enzyme properties using chymosin to make cheese.

Keywords: enzymes, casein, chymosin

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