

Benefits Of Proteolytic  
Enzymes



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# Fruit enzymes like papain and bromelain are proteolytic

enzymes, meaning they break down proteins into smaller peptides or amino acids. These enzymes are naturally found in certain fruits and have various applications in the food, pharmaceutical, and cosmetic industries.

## Chemical Properties:

- **Proteolytic Activity:** Papain catalyzes the hydrolysis of peptide bonds in proteins, particularly those involving basic amino acids like lysine and arginine.
- **Optimal pH:** Papain exhibits optimal activity in a slightly acidic to neutral pH range (5.5 to 7.0).
- **Temperature Sensitivity:** Papain is relatively heat-stable but can be denatured at very high temperatures (above 70°C). Its activity can be retained over a broad temperature range, typically between 30°C and 60°C.
- **Inhibition:** Papain's activity can be inhibited by specific chemical inhibitors, such as iodoacetate and heavy metal ions like copper and mercury, which react with its active site.