

Activity 40: Protein Denaturation

Learning Objectives

Distinguish protein denaturation and digestion

Recognize denaturing agents

Estimated Completion Time 30 Minutes

Instructor Information

A short activity emphasizing denaturation agents.

ANSWERS TO QUESTIONS

1. b) Attractive forces are disrupted.
2. Changing the pH changes the charges present on amino acid side chains and would disrupt ionic and ion–dipole attractions.
3. Agitation stretches the protein chains and moves nonpolar amino acids to the surface as it denatures.
4. The intermolecular force that is disrupted is hydrogen bonding. The water in the air affects the hydrogen bonding that was pressed in by the iron.

Activity 40: Skill Development

1. No.
2. Lemon juice is acidic and changes the pH environment of the milk proteins.
3. Mild changes that denature proteins can be reversible like changing the pH by one unit (b).