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THE ROLE OF WATER IN PEA PROTEIN HYDRATION/DEHYDRATION, DENATURATION AND DECOMPOSITION

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In this work, we use Differential scanning calorimetry (DSC) to detect the denaturation of pea protein isolate (PPI) with different relative humidity (20% RH and 80 %RH) in different equilibrium time (4 months and 7 days). Using this approach, we obtained the temperatures of PPI denaturation and decomposition, and also concluded that time has an important effect on the redistribution of water. We also use DSC and Thermogravimetric analysis (TGA) to measure pea protein samples treated by four ways (heating, adding dithiothreitol(DTT) solution). We conclude that samples used four ways to treat are not stable and they will go back to stable state. In addition, our samples are crystalline and amorphous except old pea protein that is amorphous.

Field of study

Biophysics

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