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High Pressure, a Unique Tool for Food Texturization

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High pressure is used to texturize food with two different strategies. The first strategy consists of using high pressure of several hundred MPa as a gelling agent instead of any other gelling or coagulating agents. In the second strategy, a moderate pressure of 300 MPa is used as a pretreatment to modify the food component and to improve the efficiency of the traditional texturing treatment such as rennet coagulation of milk, and so on. In both cases, pressure effects depend on parameters such as the nature and the concentration of the macromolecules, the temperature of pressurization, the holding time and pressure, the presence of additives. The behavior of real foods upon pressurization is even more

to that of macromolecular model solutions due to their complex conformation, especially, to the presence of enzymes which are sometimes hardly pressurized. Findings exposed in this article demonstrate that high pressure is a unique tool to texturize food and provide products with unique properties.

Keywords: [high pressure](#), [texturization](#), [high-pressure-induced gelation](#), [food proteins](#), [polysaccharides](#), [food processing](#)

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