

Giant Achievements in Food Processing

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Abstract : After long period of human experience about food processing from raw eating to canning of food in the last century now it is time to use novel technologies which are sometimes completely different from common technologies. It is possible to decontaminate food without using heat or the foods are stored without using cold chain. Pulsed electric field (PEF) processing is a non-thermal method of food preservation that uses short bursts of electricity, PEF can be used for processing liquid and semi-liquid food products. PEF processing offers high quality fresh-like liquid foods with excellent flavor, nutritional value, and shelf-life. High pressure processing (HPP) technology has the potential to fulfill both consumer and scientific requirements. The use of HPP for over 50 years has found applications in non-food industries. For food applications, 'high pressure' can be generally considered to be up to 600 MPa for most food products. After years, freezing has its high potential to food preservation due to new and quick freezing methods. Foods which are prepared by this technology have more acceptability and high quality comparing with old fashion slow freezing. Thus, quick freezing has further been adopted as a widespread commercial method for long-term preservation of perishable foods which improved both the health and convenience of everyone in the industrialised countries. Above parameters are achieved by Fluidised-bed freezing systems, freezing by immersion and Hydrofluidisation on the other hand new thawing methods like high-pressure, microwave, ohmic, and acoustic thawing have a key role in quality and adaptability of final product.

Keywords : quick freezing, thawing, high pressure, pulse electric, hydrofluidisation

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