



Innovative Food Processing and Preservation Techniques

Pratibha Pillai, Akanksha Krishnan, Vasvi Sethi, Shivangi Naithani, Nimisha Tyagi, Mayank Pareek, Neeraj Wadhwa *

Department of Biotechnology, Jaypee Institute of Information Technology, Noida, Uttar Pradesh, India

Address for Correspondance: Neeraj Wadhwa, neeraj.wadhwa@jiit.ac.in

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ABSTRACT: Throughout the history of mankind science has always tried to search the realm of the unknown, bringing along new discoveries, allowing our lives to become healthier, more efficient, and safer. The force driving our scientists in today's world is the desire to preserve the one fuel that keeps our lives going: Food. Preservation of food increases its longevity keeping its nutritional value, chemical & physical properties intact. Food processing is the transformation of raw ingredients, by physical or chemical means into marketable food products that can be easily prepared and served to the consumer. This review compares the salient features of three commercially well established food processing techniques like food irradiation, Ohmic heating and High pressure processing (HPP). Food irradiation is a process of exposing food to ionizing radiation such as gamma rays emitted from the radioisotopes ^{60}Co and ^{137}Cs respectively, or high energy electrons and X-rays produced by machine sources. Ohmic heating or Joule heating has immense potential for achieving rapid and uniform heating in foods which provides microbiologically safe and high quality foods. High pressure processing (HPP) is a non-thermal technology that involves the sterilization of food by the means of ultra-high pressures, which leads to extending the shelf life of processed food, as well as maintains the nutritional value and quality of food products. It has been reported by many researchers that HPP is a much better technique which can be applied to raw food material e.g. fruits and eggs as well as processed food items. © 2016 iGlobal Research and Publishing Foundation. All rights reserved.

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