Emerging green food processing methods: Nonthermal technologies

This paper will review the potential of nonthermal methods (pulsed electric field, high pressure processing, high intensity pulsed light, ozonization, ultrasound, cold plasma processing, ultraviolet and ionizing radiation) as safe and alternative green food processing strategies. The development of green processing technologies is a priority for industry in order to minimize the use of organic solvents as well as provide more energy efficient and economical methods. Examples of the advantages of some of these technologies will be presented including recent work in my laboratory using ultrasound for removing chlorophyll from hemp oil.

Biography

N A Michael Eskin is Professor of Food Biochemistry in the Department of Human Nutritional Sciences in the Faculty of Agricultural and Food Sciences at the University of Manitoba, Winnipeg, Canada. He is the author and co-author of 13 books several of which were translated into Japanese, German and Malay. His book “Biochemistry of Foods”, first published in 1971 by Academic Press, New York has become a classic in the field with the third edition released in 2013 and the Portuguese edition released in 2015. His research work includes original work that was crucial for establishing the properties and performance of canola oil that helped to successfully launch it worldwide. He has also done extensive research on yellow mustard mucilage.

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