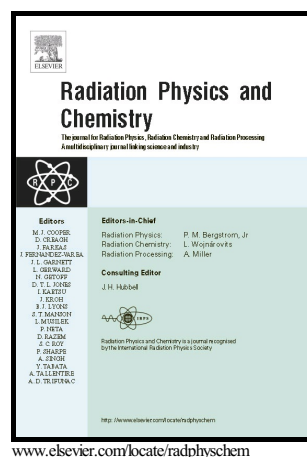


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Food irradiation: Special solutions for the immuno-compromised

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Abstract

Safety of food is particularly important for immuno-compromised patients, because these people are vulnerable to all sorts of infectious complications and foodborne pathogens as well, and even organisms normally considered non-pathogenic may cause problems. According to the guidelines published by the FDA, immunocompromised patients have to avoid high-risk foods, and advised to consume only pasteurized juice, milk or cheese, and well-cooked eggs, poultry, meat and fish. In the frame of an IAEA CRP the objective was to develop, in collaborations with the healthcare community, the use of irradiation to increase the variety, availability and acceptability of foods for immunocompromised, for example irradiated fresh produce (fruits, vegetables, salads) and ready-to-eat meals. Further aim was to widen the acceptance of irradiated foods by the healthcare and regulatory communities.

Keywords

immuno-compromised; foodborne disease; irradiated food; wholesomeness; nutritional value; hygiene

Introduction

Proportion of the vulnerable people in the society is increasing all over the world. These people are susceptible to all sorts of infectious complications from any microorganisms. Lund and O'Brien (2011) reviewed the occurrence of foodborne diseases and possible prevention strategies in vulnerable people. A 15-20% of the population shows greater susceptibility to foodborne diseases than the general population even in such developed countries as United Kingdom or United States. The vulnerable population includes several groups of people e.g. people with primary immunodeficiency, immuno-compromised patients, including those treated with chemotherapy or radiation therapy, transplant patients, persons with leukemia or with diseases of the immune system, AIDS patients, malnourished persons, pregnant women, young children and elderly people. Safety of food is particularly important, because these people are vulnerable to all sorts of infectious complications and foodborne

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