

# Food Preservation by Irradiation



# Radiation Preservation Of Food

**United States. Department of  
Commerce. Office of Technical  
Services**



## **Radiation Preservation Of Food:**

**Food Preservation and Irradiation** S. N. Mahindru, 2013      Food Preservation by Irradiation Grace M. Urrows, 1968  
Preservation Of Food By Ionizing Radiation Edward S. Josephson, Martin S. Peterson, 2018-01-18 Food Scientists the world over should keep abreast of advances in knowledge and techniques in this developing new food process The place to start is with these three volumes which are without question the most comprehensive and the most authoritative source of information on the basic science and technology yet published on food preservation by the application of ionizing radiation

**Preservation Of Food By Ionizing Radiation** Edward S. Josephson, Martin S. Peterson, 2018-10-24 Food Scientists the world over should keep abreast of advances in knowledge and techniques in this developing new food process The place to start is with these three volumes which are without question the most comprehensive and the most authoritative source of information on the basic science and technology yet published on food preservation by the application of ionizing radiation

*Radiation Preservation of Food*, 1967      *Preservation of Food by Ionizing Radiation* Edward S. Josephson, 1982 V 1 t 87 00482 Historical aspect of the radiation preservation of food National and international programs Certain utilization aspects of food irradiation Atomic structure Interactions of charged particles and  $\gamma$  rays with matter Isotope Gamma radiation sources Machine sources Dosimetry Radiation protection and health physics in food irradiation facilities Radiolytic effects in foods v 2 t 87 00439 Radiation chemistry of water soluble food components Radiolysis of nonaqueous components of foods Reaction mechanisms irradiation parameters and product formation Action of radiation on bacteria and viruses Effect of radiation at the cellular and tissue level Action of radiation on protozoa and helminths Radiation effects on arthropods Packaging irradiated food v 3 t 87 00443 Radurization and radication meat and poultry Radurization and radication fish and shellfish Radurization and radication fruits and vegetables Radurization and radication spices Delay in postharvest ripening and senescence of fruits Sprout inhibition in tubers and bulbs Insect disinfestation of grain and fruit Radappertization of meat poultry finfish shellfish and special diets

**Current Status & Commercial Prospects for Radiation Preservation of Food** Harry W. Ketchum, Jack W. Osburn, United States. Business and Defense Services Administration, Jerome Deitch, 1965      *Food Irradiation Technologies* Isabel C F R Ferreira, Amílcar L Antonio, Sandra Cabo Verde, 2017-12-19 Food preservation by irradiation is gaining recognition as a technology that is more environmentally benign than other current processes such as post harvest chemical fumigation it has less impact on thermally sensitive compounds than thermal decontamination technologies such as hot water or steam and the technology is more accessible and cheaper As the technical and economic feasibility as well as the level of consumer acceptance have increased its use has been growing fast International organizations including the Food and Agriculture Organization of the United Nations FAO the International Atomic Energy Agency IAEA and the World Health Organization WHO have coordinated and worked with others to develop norms and review the safety and efficacy of irradiated foods Commended in the Foreword by Carl

Blackburn Food Irradiation Specialist Joint FAO IAEA Division of Nuclear Techniques in Food and Agriculture this book makes a strong case for the use of this overwhelmingly safe food processing technique This comprehensive book is a useful reference for food technologists analytical chemists and food processing professionals covering all aspects of gamma electron beam and X ray food irradiation its impact on food matrices and microorganisms legislation and market aspects It is the first book to cover control and structural analysis in food irradiation and being written by leading experts in the field addresses the current global best practices It contains updated information about the commercial application of food irradiation technology especially regarding the type of radiation based on food classes and covers dosimetry radiation chemistry food decontamination food quarantine food processing and food sterilization **Food Preservation by Irradiation** ,1978

Abstract Ionizing radiation represents an economical though underutilized method for preserving food The technical economic regulatory and health aspects of food irradiation were the topics of an international symposium November 1977 the participants recognized the importance of food irradiation in the context of world wide food shortages Volume I reviews principles and applications of food irradiation technology Control of physiological changes in plants animal infestation and microbial spoilage is examined Chemical changes induced by irradiation are described Volume II considers toxicological studies microbiological changes in food public health approval and consumer acceptance of irradiated food and economics and energy issues Irradiation facilities are also discussed A plan of action for food irradiation in the future is presented

Status of the Food Irradiation Program United States. Congress. Joint Committee on Atomic Energy. Subcommittee on Research, Development, and Radiation,1968 *Food Irradiation* V M Wilkinson,G. W. Gould,1996-01-15 This reference guide is applicable to the food industry research institutions academia and trade and consumer organisations Contents include Introduction trends in food spoilage and safety food preservation technologies the use of ionising radiation Food irradiation topics from additives to yoghurt List of entries by category including listing by food groups and components control of microbiological hazards and irradiation methods **Preservation Of Food By Ionizing Radiation** Van C

Josephson,2018-01-18 Food Scientists the world over should keep abreast of advances in knowledge and techniques in this developing new food process The place to start is with these three volumes which are without question the most comprehensive and the most authoritative source of information on the basic science and technology yet published on food preservation by the application of ionizing radiation **Food Irradiation** R. A. Molins,2001-05-24 In 1997 the FDA approved the use of low dose ionizing radiation to eliminate pathogens in red meat This food processing technology can improve the safety of food and extend the shelf life of certain foods by eliminating pathogenic bacteria parasites and other microorganisms that cause food borne disease Currently forty two countries practice some form of food irradiation Food Irradiation Principles and Applications provides a comprehensive up to date account of food irradiation principles effects applications and limitations including global regulatory issues and the economics of food irradiation Written by an

international panel of scientists this book focuses on science and technology and offers thorough coverage of the current use of food irradiation around the world The contributors in this book present irradiation as a truly critical control point for raw solid foods of animal origin Food Irradiation Principles and Applications discusses such topics as Radiation inactivation of microorganisms Disinfestation of stored grains pulses dried fruits and nuts Irradiation as a quarantine treatment Irradiation of meat and poultry fish and shellfish fruits and vegetables and tuber and bulb crops Radiation decontamination of spices herbs condiments and other dried food ingredients Process control and dosimetry in food irradiation Food professionals in both academia and industry as well as food safety experts food scientists research scientists and food processing managers will find Food Irradiation Principles and Applications a reliable and valuable reference     Status of the Food Irradiation Program United States. Congress. Joint Committee on Atomic Energy Subcommittee on Research, Development, and Radiation,1968     National Food Irradiation Research Program United States. Congress. Joint Committee on Atomic Energy,1960     **A Progress Report on Research** ,1957     **Radiation Processing of Foods** United States. Congress. Joint Committee on Atomic Energy. Subcommittee on Research, Development, and Radiation,1965 Includes AEC economic reports on food irradiation p 217 592     *Food Preservation by Irradiation, 1951-58* United States. Department of Commerce. Office of Technical Services,1959     *Radiation Preservation of Foods* U.S. Atomic Energy Commission,1965     **National Food Irradiation Research Program: January 14 and 15, 1960** United States. Congress. Joint Committee on Atomic Energy,United States. Congress. Joint Committee on Atomic Energy. Subcommittee on Research, Development, and Radiation,1960 Considers status of DOD food irradiation research programs Focuses on Army Dept cancellation of plans to construct an Ionizing Radiation Center at Stockton Calif b Logistic and Economic Feasibility Study on Radiation Sterilization of Foods Quartermaster and Container Inst for the Armed Forces June 28 1955 Aug 28 1956 p 475 569 c Evaluation of Size of USAIRC and Logistics of Irradiated Meat Rpt to Quartermaster Radiation Planning Agency Quartermaster RPD Command Dec 11 1959 p 571 627 a Food Preservation by Ionizing Energy Army Dept Office of the Quartermaster Gen Dec 1959 p 147 235 Includes following reports Continuation of hearings on the Army s revised national food irradiation programs Medical Nutrition Laboratory An assessment of the possible effects to human beings of short term consumption of food sterilized with gamma rays p 771 804 An evaluation in human beings of the acceptability disestibility and toxicity of port sterilized by gamma radiation and storied at room temperature p 805 822 Short term human feed in studies of foods sterilized by gamma radiation and stored at room temperature p 823 850

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