

FI-11**EVALUATION OF LOW-DOSE OF IONIZING RADIATION ON MICROBIOLOGICAL SAFETY OF VEGETABLES MINIMALLY PROCESSED**

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The minimally processed foods providing the consumer with a product quality, safety and practicality. However, minimal processing of food does not reduce pathogenic population microorganisms to safe levels. Ionizing radiation used in low doses is effective to maintain the quality of food, reducing the microbiological load and rather compromising nutritional values and sensory. The association minimal processing with irradiation could improve the quality and safety of product. The aim of this study was to evaluate the effectiveness of low-doses of ionizing radiation on the reduction of microorganisms in processing of minimally processed white carrot and string beans. The results show that the ionizing radiation of minimally processed vegetables could decontaminate it without several changes in its properties.

Key words: minimally processed foods, ionizing radiation, decontaminate

FI-12**RADIOSENSITIZATION OF BACILLUS CEREUS SPORES IN MINCED BEEF TREATED WITH ACTIVE COMPOUNDS FROM SELECTED ESSENTIAL OILS**

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Minced meat (5% fat) previously inoculated with *Bacillus cereus* spores (106 CFU/g) was treated with five constituents usually present in essential oils (cinnamaldehyde, DL-menthol, eugenol, thymol and thyme powder). These compounds were mixed separately onto the meat at concentrations ranging from 0-3% in order to determine the concentration needed to reduce by 1 log the population of *B. cereus* ATCC 7004 spores. Cinnamaldehyde required the lower concentration (1.47%). The best antimicrobial compound selected (i.e., cinnamaldehyde (1.47%)) was mixed with ascorbic acid (0.5%) and/or sodium pyrophosphate decahydrate (0.1%) and tested for his efficiency to increase the relative radiosensitivity of *B. cereus* spores in minced meat. Meat samples (100 g) were packed under air and then irradiated at doses from 0 to 7 kGy for the determination of the radiation D10-value of *B. cereus* spores. Results demonstrated that the irradiation treatment in presence of the cinnamaldehyde and sodium phosphate decahydrate increased the relative radiation sensitivity of *B. cereus* spores by two folds.