

*oleracea* L. var. *acephala* ) is the most consumed in Brazil, as an ingredient of salads and also usual in preparation of a typical Brazilian dish called *feijoada*. Food irradiation is a world wide spread technology used to improve the quality of vegetables extending the shelf-life and reducing microorganisms present in leaves. Color is the first sensorial aspect realized by consumers, being an important factor of refuse. The objective of this paper was to analyze the color of irradiated cabbage treated by electron beam from a linear accelerator at different radiation doses. The cabbage samples were irradiated at IPEN-CNEN/SP in an electron accelerator (Radiation Dynamics Inc. USA, 1.5 MeV, 25 mA) at doses of 1.0 – 1.5 kGy and also a control sample. Statistical analysis was done to compare the efficacy of different radiation doses. Slight differences in color measurement were observed in the irradiated samples, although the quality of cabbage was maintained until the 7<sup>th</sup> day of storage.

## SM/EB-06

### Advances of E-beam Processing for Food Preservation in Brazil

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Food irradiation is a well known process in which food products are exposed to a controlled amount of ionizing radiation to kill harmful microorganisms, to delay ripening and also to inhibit sprouting. During last years the demand for this technology had increased in order to reduce losses all along food chain supply. E-beam processing trends to be the future's choice, once besides the possibility of being disconnected when not in use, is easily available, does not need reloading and streamlines the process, reducing logistics costs. In Brazil, the use of this technology is gaining importance day by day, mainly due to the necessity of food industry on guarantee food assurance and enhances its shelf-life. Although only few industries has already installed e-beam accelerators to its processing systems and also not many provides irradiation services to local companies, this scenery trends to change due to knowledge diffusion, high cost effectiveness relationship and government support.

## SM/EB-07

### Electron Beam Irradiation Effects on Some Packaged Dried Food Items

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For radical sports practitioners, small nutritious snack foods are needed. At the same time, food preparation must guarantee long shelf life and be compact or lightweight for easiness of carrying. Commercial individually packaged foods can be used either for sports practitioners like adventure racing or eventually as military rations. Irradiation processing of foods is an important preservation technology. High-voltage electron beams generated from linear accelerators are an alternative to radioisotope generators as they require much shorter exposure times (seconds vs. hours for  $\gamma$  irradiation) to be effective and are currently used to pasteurize meat products among others food items. This work describes the application of electron beam irradiation on some food items used in sport training diets: fiber rich cookies, fruit cereal bars, instant dehydrated asparagus soup and instant Brazilian corn pudding. Each kind of sample contained 3 groups of 15 units each. Irradiation was performed with an electron beam accelerator Dynamitron (Radiation Dynamics Inc.) model JOB 188, with doses of 5 and 10 kGy. For the evaluation of irradiated samples a methodology based on the Analytical Norms of the Instituto Adolfo Lutz, one of the South America Reference Laboratories was employed. The microbiological and sensory analyses of the diverse irradiated samples are presented. Electron beam irradiation resulted in significant reduction of the fungus and yeast load but caused dose dependent differences of some sensory characteristics.