

EVALUATION OF PROFENOFOS IN AQUEOUS SOLUTION BY ELECTRONS BEAM

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Profenofos is an organophosphate insecticide used widely in Brazil for controlling pests of corn, soybeans, coffee, tomato, cotton, beans, potatoes and others. Irradiation is process largely technique used worldwide and recommended by many health agencies for preservation of foods that uses gamma rays, X-rays or accelerated electrons. Food irradiation has been extensively applied for the treatment of various food products, reducing pathogens, replacing chemical fumigants and an important technology in food Industry. The purpose of this present research were evaluated the effect of E-beam on profenofos aqueous solutions. The samples were irradiated with a electrons beam accelerator, exposed doses of 0 (control), 4.6, 11.7 and 31.6 kGy. Furthermore, degradation of profenofos after irradiation treatment were qualitatively determinated using gas chromatography coupled mass spectrometry (GC-MS). E-beam treatment with radiation dose 31.6 kGy promoted reduction of 93.40% profenofos solution.