

Comparative Effects of Gamma Irradiation and Ozone Treatment for the Hygienic Quality and Long-Term Storage of Red Pepper Powder

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The comparative effects of gamma irradiation and ozone(O₃) treatment on the sterilization, physicochemical properties and sensory quality of red pepper powders were investigated. For sterilization of the microorganisms, 7.5~10kGy of gamma irradiation completely eliminated the coliforms, yeast & molds and total aerobic bacteria. In contrast, ozone treatment failed to eliminate the highly contaminated microbial load, especially total aerobic bacteria. The physicochemical properties such as capsaicin, capsanthin, browning, fatty acid compositions and sensory quality were not significantly changed by gamma irradiation was more effective than ozone treatment for the sterilization and maintenance of physicochemical and sensory qualities of red pepper powders.