

Effects of Gamma Irradiation on Chemical and Antioxidant Properties of Iranian Native Fresh Barberry Fruit

Authors : Samira Berenji Ardestani, Hamid Reza Akhavan

Abstract : Gamma irradiation greatly reduces the potential microbiological risk of fresh fruits, resulting in improved microbial safety as well as extending their shelf life. The effects of 0.5-2 kGy gamma doses on some physicochemical, microbial and sensory properties of fresh barberry fruits (*Berberis vulgaris*) during refrigerated storage for 40 days were evaluated. The total anthocyanin and total phenolic contents of barberry fruits decreased in a dose-dependent manner immediately after irradiation and after subsequent storage. In general, it is recommended that, according to the effect of gamma radiation on physicochemical, microbial and sensorial characteristics, doses of 1.25-2 kGy could be used.

Keywords : antioxidant property, barberry fruit, chemical properties, gamma irradiation

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