

Title Effect of gamma irradiation on histological and textural properties of carrot, potato and beetroot
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Abstract

The exposure to irradiation pretreatment (3.0–12.0 kGy) results in increase in cell wall permeabilization, leading to softening of tissue, thereby affecting the textural and histological properties. The textural properties such as hardness, cohesiveness, springiness, gumminess and chewiness were found to decrease with an increase in irradiation doses up to 12.0 kGy. The histological examination supported the above observations. The calcium pretreatment was explored as a pretreatment method to reduce the extent of damage in food texture due to irradiation.