

عنوان مقاله:

Gamma radiation processing under modified atmosphere packaging effects on microbial quality and antioxidant activity of fresh leafy vegetables during storage

محل انتشار:

مجله تحقیقات و کاربردهای هسته ای، دوره 2، شماره 2 (سال: 1401)

تعداد صفحات اصل مقاله: 6

نویسندگان:

M. Ahmadi - Roshan - *Research School of Radiation Applications, Nuclear Science and Technology Research Institute (NSTRI), P. O. Box: ۱۴۳۹۵-۸۳۶, Tehran, Iran*

S. Berenji Ardestani - *Research School of Radiation Applications, Nuclear Science and Technology Research Institute (NSTRI), P. O. Box: ۱۴۳۹۵-۸۳۶, Tehran, Iran*

Kh. Ghotbi kohan - *Research School of Radiation Applications, Nuclear Science and Technology Research Institute (NSTRI), P. O. Box: ۱۴۳۹۵-۸۳۶, Tehran, Iran*

R Rafiee - *Research School of Radiation Applications, Nuclear Science and Technology Research Institute (NSTRI), P. O. Box: ۱۴۳۹۵-۸۳۶, Tehran, Iran*

F. Saeedi - *Research School of Radiation Applications, Nuclear Science and Technology Research Institute (NSTRI), P. O. Box: ۱۴۳۹۵-۸۳۶, Tehran, Iran*

M. Bathaie - *Research School of Radiation Applications, Nuclear Science and Technology Research Institute (NSTRI), P. O. Box: ۱۴۳۹۵-۸۳۶, Tehran, Iran*

E. Zarrin - *Research School of Radiation Applications, Nuclear Science and Technology Research Institute (NSTRI), P. O. Box: ۱۴۳۹۵-۸۳۶, Tehran, Iran*

خلاصه مقاله:

Fresh leafy vegetables are great source of vital nutrients, to promote health and prevent diseases but they can transmit pathogenic microorganisms to human beings. Shelf life of these products is very limited post harvest and after three days at refrigeration temperature, they will spoil. Radiation processing combined with modified atmosphere packaging and refrigeration temperature is a practical treatment to ensure safety and enhance vegetables shelf life even to be used in international trades. The effects of irradiation doses at 0, 0.25, 0.5 and 1 kGy on fresh leafy vegetables packed under air, N₂ and vacuum atmospheres up to 10 days of storage at 4 °C were studied. According to the results of microbial tests, and antioxidant activity of DPPH°, gamma radiation at dose of 0.5 kGy under N₂ packing atmosphere are recommended as optimal storage conditions up to 10 days at 4 °C for fresh garlic chives, basil, mint and parsley.

کلمات کلیدی:

Gamma, Modified atmosphere packaging (MAP), Fresh leafy vegetables, Microbial safety, Antioxidant

