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Shelf Life Extension of Chicken Meat by γ -Irradiation and Microflora Changes

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The microbiological quality of chicken meat samples produced in several different areas in Japan was investigated. The total aerobic bacteria were between 8×10^4 to 6×10^6 per gram. Coliforms were 9×10^1 to 2×10^4 per gram for *Escherichia*, *Proteus* and *Klebsiella*. The dominant putrefactive bacteria under chilled conditions were determined to be lactic acid bacteria, *Pseudomonas* and *Flavobacterium*. Low dose γ -irradiation at 1 kGy resulted in disappearance of the dominant putrefactive bacteria, coliforms and *Staphylococcus* on plate agars. The shelf life of irradiated chicken meat at 1 kGy was prolonged 3 times compared with non-irradiated chicken meat and could be stored for 6 days at 10°C storage. Irradiation of chicken meat at 3 kGy reduced the aforementioned dominant flora to the yeasts and *Psychrobacter*. *Salmonella* was detected slightly in some samples and was reduced to a 10^{-4} survival by a 1 kGy irradiation dose.

Keywords: [chicken meat](#), [\$\gamma\$ -irradiation](#), [shelf life](#), [hygienic quality](#), [microflora](#)

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