

***IMPROVING QUALITY OF KAREISH CHEESE BY GAMMA IRRADIATION***

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***ABSTRACT:***

This investigation aims to study the possibility to utilize gamma irradiation to prolong the shelf-life of Kareish cheese. Kareish cheese was made from fresh buffalo's skim milk, and subjected to  $\gamma$ -irradiation with 0.0, 1.5 , 2.5 and 3.5 kGy, and stored in refrigerator. The sensory, microbial and chemical properties of Kareish cheese were evaluated during cold storage. The obtained results indicated that, the counts of total viable bacteria, molds and yeasts were decreased by applying gamma irradiation. Irradiation treatment caused a significant decrease in water soluble nitrogen, acidity ,counts of total viable bacterial , mould and yeast. The overall acceptability scores, moisture content and pH value of all treatments were gradually decreased as storage period proceeded, while acidity, total nitrogen and water soluble nitrogen of all treatments were gradually increased. In addition treatments of cheese with 1.5, 2.5 and 3.5 kGy respectively prolonged the shelf-life of Kareish cheese to 42, 48 and 54 days compared to 12 days for control treatment.

***Key words:*** Kareish cheese , gamma rays .