

Modified Atmosphere Packaging (MAP) and the Effect of Chemical Preservative to Enhance Shelf Life of Khoa

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Abstract : Khoa is an indigenous heat desiccated milk product having very poor shelf life. At ambient condition, shelf-life of khoa is normally only 2 days. The aim of present study was to determine the effect of benzoic acid as preservative as well as modified atmosphere packaging (MAP) technology to enhance shelf life of khoa at $27\pm 2^{\circ}\text{C}$ and 65% RH. During storage, analysis of chemical, sensory as well as microbiological characteristics were taken into consideration to mark distinguishable changes between the package of modified atmosphere technology (MAP) and ordinarily packed khoa (with and without preservative) samples. The results indicated a significant decrease of moisture content, pH and sensory scores and increase in titratable acidity, standard plate count and yeast and mould count during storage, irrespective of the type of packaging conditions. However, the rate of changes in characteristics of product packed in modified atmosphere was found to be slow. The storage study indicated that the khoa packed in ordinary packaging, with and without preservative, was acceptable for 4 and 8 days, respectively, whereas for modified atmosphere packed samples, it was consumable up to 8 and 12 days, respectively.

Keywords : benzoic acid, khoa, modified atmosphere packaging, shelf life

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