

USE OF POTASSIUM SORBATE FOR EXTENDING THE SHELF LIFE OF STRAWBERRY FLAVOURED DRINKING YOGHURT

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Drinking yoghurt is a cultured product having liquid consistency, intended for drinking, which has a higher demand in today's market. One of the major barriers for distribution of drinking yoghurt throughout the country is low shelf life. Hence, application of chemical preservatives, which is cheap and convenient, could be used to extend the shelf life of strawberry flavoured drinking yoghurt. Therefore, this study was executed to determine the effects of potassium sorbate preservative on the shelf life of strawberry flavoured drinking yoghurt.

Drinking yoghurt samples were prepared with five different concentration levels of potassium sorbate; 0mg/kg (T₁), 50mg/kg (T₂), 100mg/kg (T₃), 150mg/kg (T₄) and 200mg/kg (T₅) with three replicates per each treatment. Effect of potassium sorbate on shelf life was investigated by measuring physiochemical, microbiological and sensory properties during 17 days of storage below 8 °C. Data were analyzed using SAS and MINITAB computer packages, with Completely Randomized Design.

Study revealed that, at initial stage of storage, there was no significant difference ($p > 0.05$) among all treatments where as, a significant difference ($p < 0.05$) was observed among T₁, T₂, T₃ and T₄ for chemical, microbiological and sensory properties at latter part. Further, it was observed that, there were no mould counts during the storage period. Even though, there was no significant difference ($p > 0.05$) between T₄ and T₅, T₄ gave the higher scores for sensory qualities, up to 15th day. Finally, it can be concluded that, the optimum potassium sorbate concentration which assures the best quality and safety for drinking yoghurt is 150mg/kg with a 15 days shelf life period that can be ensured.

Key words: Drinking yoghurt, Potassium sorbate, Preservatives, Shelf life