Study on Extending the Shelf Life of Butter Flavoured Cookies

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Cookies are baked or cooked snacks or desserts, which are small, flat and sweet in nature. They can also be bland-flavoured and can be moulded into different shapes. The basic ingredients used for butter flavoured cookies which are manufactured by the Perera & Sons Bakers (Pvt) Ltd. are wheat flour, corn starch, sugar, butter, margarine, fresh milk, salt and leavening agents. The prepared butter flavoured cookies are packed in three different packaging materials such as metal cans, polypropylene pouch with a tray made using PVC and paperboard carton with LDPE inner package and a tray made using high impact polystyrene. The shelf life of butter flavoured cookies packed in all three packaging materials is four months. This study was conducted to extend the shelf life of butter flavoured cookies. Two experiments were conducted separately to determine the most effective concentration of potassium sorbate and to determine the most effective concentration of ascorbyl palmitate. Potassium sorbate was incorporated into four different concentrations separately such as 0 mg/kg, 100 mg/kg, 200 mg/kg and 300 mg/kg and were packed in all packaging materials. Prepared cookies were stored at 45° C for four weeks and moisture content, hardness, total plate count and yeast and mould count were determined and sensory evaluations were carried out. Ascorbyl palmitate was incorporated into four different concentrations such as 0 mg/kg, 200 mg/kg, 300 mg/kg and 500 mg/kg and were packed in all packaging materials. Prepared cookies were stored at 45° C for three weeks and thiobarbituric acid reactive substances content was measured and sensory evaluations were carried out. The most effective concentration of potassium sorbate was 200 mg/kg ($P < 0.05$) and the most effective concentration of ascorbyl palmitate was 500 mg/kg ($P < 0.05$). The most suitable packaging material was the metal can ($P < 0.05$).

Keywords: Ascorbyl palmitate, Butter flavoured cookies, Packaging materials, Potassium sorbate, Shelf life

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