

**PRODUCTION AND INITIAL SHELF LIFE STUDY (ISLS)
OF COCONUT BARFI CHOCOLATE**

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ABSTRACT

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Two different formulations of coconut barfi chocolate were developed which varied amount in sugar and glucose syrup. Twenty three out of thirty panellists preferred formulation 2 which less in sugar content. Shelf life study of coconut barfi chocolate was carried out at room temperature (28-30°C) for 45 days. Qualitative and quantitative analysis of the sample were carried out at 15, 30 and 45 days of storage. Results showed that the Free Fatty Acid content were not significant different at ($p>0.05$) among all samples and the chocolate still can acceptable because the value of FFA still below 3%. Peroxide value showed no significant different ($p>0.05$) at 15 and 30 days but significantly different ($p<0.05$) at 0 and 45 days of storage. Water activity result showed significant different ($p<0.05$) at day 0, 15, 30 and 45 days of storage. No further calculation was done for total plate count and yeast and molds since the result produced below the standard requirement. Texture of all the samples showed significant different at ($p<0.05$) during the study. Samples stored at 15 days showed no significant different at ($p>0.05$) for color, appearance, taste, odor and overall acceptability. At 30 days of storage, the samples showed no significant different at ($p>0.05$) for color, appearance and odor. Result on taste and overall acceptability showed significant different at ($p<0.05$). There were significant different at ($p>0.05$) for appearance, odor, taste and overall acceptability but showed no significant different ($p<0.05$) for color at 45 days of storage.

CHAPTER 1

INTRODUCTION

Confectionery is an energy-dense food, 100 grams providing between 1300 and 2200 kilojoules. The kilojoules come mainly from sugars, but chocolate, toffees and caramels also contain significant amount fat. Plain chocolate contains about 30% fat and carob bars contain about 25%. Most confectionery items contain between 60 and 75% sugar. In general, confectionery does not supply protein, minerals or vitamins in the amounts which would provide a balance with the kilojoules. However, milk chocolate is a significant source of protein, calcium, riboflavin and iron (Rogers, 1990).

Chocolate is a dark substance made from the seeds of the cacao, a tropical tree. The word comes from two Mayan words meaning warm beverages which remind us that even after chocolate was introduced to the New World it was used for almost 300 years only as a drink (Jo, 1990). Chocolate is a high energy foodstuff with a complex nutritional profile, containing 28-40% lipids (cocoa butter, vegetable fat and milk fat), 50-70% carbohydrates and 4-8% proteins. It is an important source of mineral salts (Ca, Mg, Fe, Na, K) curing cocoa liquor and vitamins (riboflavin, vitamin A and vitamin E) (Beckett, 1994).