

UNIVERSITI TEKNOLOGI MARA

**ENCAPSULATION OF VITAMIN C
FROM PINEAPPLE SKIN JUICE USING
DRIED JELLY**

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ABSTRACT

The production of fruit-based products with a good nutritional, have a long shelf life and easy to consume is a new trend of food consumption nowadays. In this study, the Vitamin C dried jelly from Yankee pineapple skin juice is produced by using freezing and oven drying process at -18°C and 40°C respectively for 24 hours. Varies amount of dried jelly powder (3g, 5g and 7g) mixed with 100mL of pineapple skin juice and 10g of maltodextrin is used. The qualities of the Vitamin C dried jelly is observed in the aspects of shrinkage, colour changes and moisture loss. The observation indicated that the Vitamin C dried jelly which contains 7g of dried jelly powder show the best structure of dried jelly.

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CHAPTER ONE

INTRODUCTION

1.0 RESEARCH BACKGROUND

Pineapple also known as *Ananas Comosus* is well-known tropical fruit which consist of high vitamins, enzymes and antioxidant. In the global tropical fruits production volumes, pineapple is rank third after the banana and citrus [1]. During the peak season which are months of April and June, largest amount of pineapple will flood the market and this kind of situation make the food industry to keep develop new products from its [2]. The fresh fruit and juice of the pineapple is known as a rich natural source of Vitamin C, potassium, magnesium and other mineral [1].

In the processing of fresh fruit and juice of the pineapple, the residues such as skin and bagasse that rich in nutritious substances which can be employed in human diets usually not used [3]. In order to minimize the impact of the residues toward the environment, there are several process can be use to convert the residues into the valuable products and yield financial gain towards the food industries. The pineapple skin juice which rich in Vitamin C (Ascorbic acid) content can be develop in form of powder and dried jelly by using drying process.

Nowadays, the trend of food consumption is changed due to the fast economic development where the diet nutrient enrichment is more important than the calories assurance. The new generation is more aware with the important of Vitamin [4]. Vitamin C or Ascorbic acids can highly obtain from the pineapple skin juice. Vitamin C (Ascorbic acid) is a water-soluble compound nutrient that has many advantages. The nutrient may prevent many diseases such as impaired of collagen synthesis and important medium in the making of tissues like blood vessels, skin, tendons and cartilages [5].

Advancement in technology has improved the textural and types of the Vitamin C which usually found in the form of tablets and liquid. The attractive, easy to consume and has long shelf life of products is the main criteria of choice for peoples in today's world. In order to improve the textural and types of Vitamin C, a