UNIVERSITI TEKNOLOGI MARA

FORMULATION AND EVALUATION OF *PHYLLANTHUS NIRURI* L. CHEWABLE TABLET

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ABSTRACT

The aim of this study was to formulate *Phyllanthus niruri* chewable tablet 250 mg and to conduct customer acceptance study towards the newly formulated product. The tablet was prepared by using wet granulation process and physical characterization tests were carried out by collecting a sample of tablets from the batch and determining their uniformity of weight, hardness, thickness, diameter and friability. The customer acceptance study was done by distributing questionnaires to 30 Universiti Teknologi MARA students. The results showed that the formulated *Phyllanthus niruri* chewable tablet was hygroscopic and easily oxidized. The shape, colour uniformity and texture of the tablets are significantly ($p < 0.1$) influencing the customers' satisfaction towards physical appearance of the product. In terms of taste, the customers' satisfaction are significantly ($p < 0.1$) influenced by sweetness, sour and cola flavor of the product. Further formulation study should be conducted in determining the best formulation of *Phyllanthus niruri* chewable tablet with emphasizing on how to minimize the degradation process of the tablet particularly through oxidation.

CHAPTER 1

INTRODUCTION

1.1 Background

There is currently a large and ever-expanding global population base that prefers the use of natural products in treating and preventing medical problems. It is believed that natural herbs found among the world flora are able to cure various ailments and diseases. Natural herbs have presented to human as an endowment of vast therapeutic value with a wide variety of medicinal plants. Nwanjo (2007) claimed that medicinal plants are being used in traditional system of medicine from hundreds of years in many countries of the world. Medicinal plants, in parts or as a whole, are being used as human consumables, as well as therapeutic agents, because of their easy availability, low cost and minimal side effects (Sarkar et al., 2008).

Phyllanthus niruri L. is one of the intensive herbal studies that have made significant contributions in maintaining human health. It is a widely used traditional medicinal plant by oriental countries and has been reported to possess various biological activities (Yang et al., 2007). *Phyllanthus niruri* L. has been claimed to be hypoglycaemic by some researchers (Nwanjo, 2007; Mazumder et al., 2005; Taylor,