

UNIVERSITI TEKNOLOGI MARA

**THIN LAYER CHROMATOGRAPHY (TLC) PROFILING
OF MALAY TRADITIONAL HERBS**

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ABSTRACT

The main objective of this study is to obtain TLC profiling of Malay traditional herbs. TLC allows separation, detection, and quality evaluation of herbal medicines. The study begins with selection of 13 Malay traditional plants and preparation of plant extract solution. The methods for TLC include preparation of TLC tank, spotting the TLC plate, developing the chromatogram, identification and visualization, and calculation of R_f values. TLC also used to compare the standard plant sample with product containing that plant, to identify the presence or absence of a particular substance in the product. TLC provides a simple, cost effective way of rapidly determining the compounds available in Malay traditional plants. TLC is considered as reliable technique in order to qualitatively determine the compounds inside a plant if certain conditions are take into consideration with controlled environment and certain procedures are carefully conducted throughout the study.

CHAPTER 1

INTRODUCTION

The use of herbal medicines is extensive, increasing and complex. There are many reasons for the increased use of herbal medicines. These may range from the appeal of products from 'nature' and the perception of people that such products are 'safe' (or at least 'safer' than conventional medicines) to more complex reasons beliefs of individuals. [Heinrich *et al.*, 2004].

Nowadays, many herbal products can be found in market. In Malaysia, herbal medicines are sold as dietary supplements under the Ministry of Health. However, no strict action is taken to monitor the efficacy of such products. As a result, irresponsible manufacturers may include synthetic drugs to improve the efficacy of their product [Colegate and Molyneux, 2007]. Such adulteration can harm and risk the consumers.

"The Web site for Libidus, based in Kuala Lumpur, states that "it has come to our attention that a recent laboratory test of Libidus indicated that there was unlisted ingredients found in the product and therefore have made the decision to immediately stop marketing the product until such time as it can be determined how these unlisted ingredients found their way into the product and assurance that the product is once again 'all natural'." [Malaysian Medical Resources, July 20, 2006]