

Research Methodology in Chemistry

Edited by
Fiona N.-F. How, Ph.D



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STANDARDIZATION PROCESS AND PLANT METABOLOMICS IN NATURAL PRODUCTS RESEARCH

Deny Susanti

Introduction

Nowadays market of health-related products, especially herbal products, is very active and these products are manufactured and sold in all over the world. With this situation, standardization is necessary to make sure the availability of a uniform product. The standardization guarantees a consistently stronger product with guaranteed constituents.

Herbal formulations can be standardized schematically as to formulate the formulation using raw material and a comparative chemical efficacy of formulation is to be observed. And a preparation with the better clinical efficacy has to be selected.

There is several type of preparation of herbal product, known as phytomedicine, i.e. standardized extract, freeze dried product, extract, tincture, juice, dried powdered and fresh. But the standardized extract has an added value because there is a better information in term of chemical entities in the extract, effective concentration of the chemical compound and also chemical standardization. So, the standardization process is part of natural product research, especially to produce commercial product.

Method for Quality Assessment

Herbal medicine is a complicated system of mixtures if compared to synthetic drugs that only have one active ingredient in their formula. Thus, the method of choice for identification of phytomedicine are mainly intended to obtain a characteristic fingerprint of a specific plant that represent the presence of a particular quality defining chemical constituents and this extract that exhibit biological activity. For such purposes, chromatographic techniques such as high