

Standardization of *Cassia spectabilis* with Respect to Authenticity, Assay and Chemical Constituent Analysis

Type:

Article

Abstract:

Quality control standardizations of the various medicinal plants used in traditional medicine is becoming more important today in view of the commercialization of formulations based on these plants. An attempt at standardization of *Cassia spectabilis* leaf has been carried out with respect to authenticity, assay and chemical constituent analysis. The authentication involved many parameters, including gross morphology, microscopy of the leaves and functional group analysis by Fourier Transform Infrared (FTIR) spectroscopy. The assay part of standardization involved determination of the minimum inhibitory concentration (MIC) of the extract which could help assess the chemical effects and establish curative values. The MIC of the *C. spectabilis* leaf extracts was investigated using the Broth Dilution Method. The extracts showed a MIC value of 6.25 mg/mL, independent of the extraction time. The chemical constituent aspect of standardization involves quantification of the main chemical components in *C. spectabilis*. The GCMS method used for quantification of 2,4-(1H,3H)-pyrimidinedione in the extract was rapid, accurate, precise, linear ($R(2) = 0.8685$), rugged and robust. Hence this method was suitable for quantification of this component in *C. spectabilis*. The standardization of *C. spectabilis* is needed to facilitate marketing of medicinal plants, with a view to promoting the export of valuable Malaysian Traditional Medicinal plants such as *C. spectabilis*.

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