Chapter in Book

Automatic Recognition and Classification of Medicinal Plants: A Review

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ABSTRACT

Some existing methods for recognizing and classifying medicinal plants are manual, cumbersome, and time-consuming. In this chapter, a comprehensive review of recognition and classification of medicinal plants using Information Communication Technologies (ICT) – Automated Techniques are presented. The study focuses on the recognition and classification of medicinal plant's leaves using image processing-based and spectroscopic identification techniques. The work reveals that the image processing-based recognition method is more predominant in literature than the spectroscopic method of recognizing medicinal plants. Analysis of previous studies reveals that image processing-based and spectroscopic recognition methods are less cumbersome, faster, and non-destructive when compared to the chemical method. The details of various implementation platforms that are required for effective recognition and classification of medicinal plants are also presented in this chapter. It is believed that with the techniques outlined in this study, more people, including non-experts using electronic devices, would be able to easily recognize and classify medicinal plants. This would offer better insights into their usefulness and conservation for the benefit of the future generation.