

EXTRACTION, ISOLATION AND CHARACTERIZATION OF BIOACTIVE COMPOUNDS FROM PLANTS' EXTRACTS

Type:

Article

Abstract:

Natural products from medicinal plants, either as pure compounds or as standardized extracts, provide unlimited opportunities for new drug leads because of the unmatched availability of chemical diversity. Due to an increasing demand for chemical diversity in screening programs, seeking therapeutic drugs from natural products, interest particularly in edible plants has grown throughout the world. Botanicals and herbal preparations for medicinal usage contain various types of bioactive compounds. The focus of this paper is on the analytical methodologies, which include the extraction, isolation and characterization of active ingredients in botanicals and herbal preparations. The common problems and key challenges in the extraction, isolation and characterization of active ingredients in botanicals and herbal preparations are discussed. As extraction is the most important step in the analysis of constituents present in botanicals and herbal preparations, the strengths and weaknesses of different extraction techniques are discussed. The analysis of bioactive compounds present in the plant extracts involving the applications of common phytochemical screening assays, chromatographic techniques such as HPLC and, TLC as well as non-chromatographic techniques such as immunoassay and Fourier Transform Infra Red (FTIR) are discussed.

Author	<ul style="list-style-type: none">• Sasidharan, S.• Chen, Y.• Saravanan, D.• Sundram, K. M.• Latha, L. Y.
Source	African Journal of Traditional Complementary and Alternative Medicines
ISSN	0189-6016
DOI	-
Volume (Issue)	8(1)
Page	1-10
Year	2011

Keyword:

Bioactive compound, Plant Extraction, Isolation, Herbal preparations, Natural products
indian medicinal-plants, phytochemical constituents, pyrrolizidine, alkaloids, mass-
spectrometry, quality-control, propolis, samples, assay

Please Cite As:

SASIDHARAN, S., CHEN, Y., SARAVANAN, D., SUNDRAM, K. M. & LATHA, L. Y.
2011. **EXTRACTION, ISOLATION AND CHARACTERIZATION OF BIOACTIVE
COMPOUNDS FROM PLANTS' EXTRACTS.** *African Journal of Traditional
Complementary and Alternative Medicines*, 8, 1-10.

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