

Proximate and qualitative analysis of different parts of *Piper sarmentosum*, and quantification of total amides in various extracts

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ABSTRACT

Present study aimed to analyze crude powders and extracts of different parts of *Piper sarmentosum* for proximate, qualitative and quantitative studies to prepare standardized botanical drugs from the plant. Unlike synthetic drugs, standardization of botanical drugs is always challenging for natural product researchers due to inadequacy and unavailability of standards and methods. Standardization of botanical drugs is not just an analytical process which ends with the detection of few constituents rather it embodies a set of analytical, biochemical and biological protocols. Keeping analytical protocols in view, crude powders were analyzed for the content of moisture, total ash, acid insoluble ash, sulphated ash and soluble extractives in water and methanol. These physicochemical properties were found within specified limits. Comparison of Fourier Transform Infrared (FTIR) fingerprints of crude powders of different parts indicated the difference of constituents. Similarly, comparison of ultra violet (UV) profiles of extracts of all the parts exhibited discrimination. Qualitative analysis of aqueous and ethanol extracts by high performance thin layer chromatography (HPTLC) indicated the presence of amides in ethanol extracts of all parts of the plant. Quantitative analysis of extracts indicated that total amide content was significantly higher by colorimetry as compared to UV spectrophotometry. The distribution of amides in different parts was in the order fruit > root > leaf > stem ($P=0.000$). It is concluded from the study that amide content varies in different parts of the plant and ethanol is a better solvent for their extraction. Additionally, colorimetric method exhibits high content of amides.

KEYWORDS

Piper sarmentosum . Piperaceae . Standardization . FTIR . HPTLC

REFERENCES