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Organoleptic and phytochemical analyses of different extracts of *Hydnophytum formicarum* Jack. tubers of Cambodia

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INTRODUCTION

Hydnophytum formicarum Jack. (Family: Rubiaceae) (Local name: *Mroch Sourt Damrei*) is a medicinal plant which is used by traditional healers for the treatment of various ailments such as cardiovascular disease, hepatitis, rheumatism and diarrhea. This plant also exerts some therapeutic effects including anti-inflammatory, anti-parasitic and anti-oxidant activities.

OBJECTIVES

The study aims at analyzing the organoleptic features and phytochemical components of *Hydnophytum formicarum* Jack. native to Cambodia.

MATERIALS AND METHODS

The dried *Hydnophytum formicarum* Jack. tubers were acquired from local plant drugstore and authenticated by University of Puthisastra (UP)-Herbarium (UPFPH-050031). The organoleptic feature was evaluated by means of sense organs such as colour, odour, taste and texture parameters. The dried plant was extracted with three solvents comprised of methanol, ethanol and chloroform. Each plant was extracted for 15 minutes at room temperature by Ultrasonication-Assisted Extraction (UAE) method. The extracting yields were subjected to the analysis of phytoconstituents including alkaloids, saponins, flavonoids, phenolic compounds, tannins, terpenoids, resins and essential oils.

RESULTS

The organoleptic study of the dried *Hydnophytum formicarum* Jack. indicated that the tuber was light reddish brown; the odour was characteristic; the taste was bland; and the texture was slightly rough. The extraction yields of *Hydnophytum formicarum* Jack. tubers accounted for 3.28% (chloroform extract), 6.84% (methanol extract) and 7.86% (ethanol extract). The phytochemicals analysis showed the positive tests of alkaloids, saponins, flavonoids and essential oils in chloroform extract; of saponins, terpenoids and phenolic compounds in methanol extract; and of resins in ethanol extract.

CONCLUSION

This study authenticates the proper organoleptic features and phytochemical components of *Hydnophytum formicarum* Jack. native to Cambodia. These scientific data would be beneficial for the field of natural drug manufacturing in term of plant identification.

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