ABSTRACT

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STUDY OF EXTRACTION AND ISOLATION OF ANTIOXIDANT FROM EDIBLE BIRD’S NEST
(xv + 132 pages, 11 tables, 12 figures, 12 appendixes)

Edible bird’s nest is one of several animal products that is known for its function such as it can cure a cough, alleviate asthma, increase concentration, and recently research has been revealed that edible bird’s nest has antioxidant activity but the extraction, isolation and identification of antioxidant compounds have not been carried out. This research is designed to study extraction and isolation of antioxidant from edible bird’s nest. Edible bird’s nest is extracted using gradual maceration method with three different solvents; n-hexane, ethyl acetate, and ethanol. The isolation is done by Column Chromatography and Thin Layer Chromatography (TLC). This assay indicates that the crude extract is obtained by ethanol extract with IC\textsubscript{50} 43636,49 ppm. Maximum wavelengths of the ethanol extract are 315-696 nm. The phytochemical screening of ethanol extract shows the existence of alkaloids, flavonoids, tannins, and terpenoids. Fraction that is chosen and obtained from Column Chromatography is fraction B (80% ethyl acetate : 20% ethanol and 10% ethyl acetate and 90 ethyl acetate) with IC\textsubscript{50} 355,82 ppm. This assay indicates that fraction has lower IC\textsubscript{50} than the crude extract. Fraction B is isolated with TLC and the best combination of solvents to get one spot is 20% ethyl acetate : 80% ethanol with R\textsubscript{f} 0,82. Azulene, benzothiazole, hexadecane, and heptadecane as the isolated spot from TLC are investigated by GC-MS and show antioxidant activities.

Keywords: antioxidant, Column Chromatography, edible bird’s nest, extraction, Thin Layer Chromatography

References: 77 (1981-2011)