International Journal of ChemTech Research
CODEN (USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555
Vol.11 No.11, pp 356-363, 2018

Phytochemical Content, Total Phenols, and Antioxidant Activity of Mangrove*Sonneratia alba*Young Leaf Through Different Extraction Methods and Solvents

Verly Dotulong*, Djuhria Wonggo, Lita A.D.Y Montolalau

Study Program of Fisheries Product Technology, Faculty of Fisheries and Marine Science,Sam Ratulangi University, Jl. Kampus Bahu Manado–95115, North Sulawesi, Indonesia

Abstract : This study was aimed at finding out the antioxidant potential of mangrove *Sonneratia alba*young leaf collected from Wori village, Wori district, North Sulawesi. The extract was obtained from dry powder of young leaf of *S.alba*using 2 extration methods (soxhlet and maceration), and2 solvents (methanol and ethanol). Phytochemical analyses were qualitatively done to detect the presence of phenols, flavonoid, tanin, steroid, triterpenoid,and alkaloid, total phenols using Folin Ciocalteau and antioxidants using DPPH (1-1-diphenil-2-pikrihidrasil) method. Results found that the extract rendement was higher in soxhlet extraction using 9.77% methanol or 9.18% ethanol than in maceration method using 2.61% methanol and2.51% ethanol.Phytochemical analyses found that soxhlet extraction with either methanol or ethanol detected all phytochemical components tested, while maceration extraction did not detec the presence of alkaloid**.** The highest total phenol was recorded in the maceration extract with ethanol (34.2 mgGAE/g extract) followed by soxhlet extraction with methanol (33.6 mgGAE/g), metanol maceration (31.7 mgGAE/g), and ethanol maceration (28.6 mgGAE/g). Higher antioxidant activity was found in 2 samples macerated with ethanol (IC_{50} DPPH=5.01µg/mL) and sokhlet with methanol (IC_{50} DPPH=5.16µg/mL) than that of vitamin C (IC_{50} DPPH=5.21µg/mL), while 2 other samples had lower antioxidant activity than that of vitamin C, soxhlet ethanol extract (IC_{50} DPPH=6.23µg/mL) and methanol maceration (IC_{50}=7.45µg/mL). As a whole, this study concluded that young leaf extract of *S.alba*is potential as natural antioxidant source.

Keywords : young leaf, *S.alba*, phytochemicals, total phenol, antioxidant.

Verly Dotulong *et al* /International Journal of ChemTech Research, 2018,11(11): 356-363.

DOI= http://dx.doi.org/10.20902/IJCTR.2018.111140

*****