

ABSTRACT

“Kamlowelen” and “Kayu Bawang” are native papuan trees that have never been investigated before. Both tree barks are commonly used as a seasoning, tea, and medicine. In the present study, total phenolic content (TPC), DPPH assay, and phytochemical screening of tree barks extracted using five different solvents (Methanol, acetone, ethyl acetate, chloroform, and hexane) were analyzed. Among five solvents, methanol extract exhibit the lowest IC50 values (496.5±60.29 µg extract/ml at “Kamlowelen” and 1166.08±71.75 µg extract/ml for “Kayu Bawang”), while the highest IC50 values was found in hexane extract (50763.61±12299.76 µg extract/ml for “Kamlowelen” and 42694.59±11535.01 µg extract/ml for “Kayu Bawang”). In addition, the highest total phenolic activity was also observed in methanol extract for both tree barks (142.49±33.96 mg GAE/g extracts for “Kamlowelen” and 14.97±0.54 mg GAE/g extracts for “Kayu Bawang”). As for the phytochemical screening, methanol and acetone extract showed the best result as they were able to extract the most phytochemical compounds classes compared to other solvent. The result of this study showed that the choice of solvent for extraction can affect the result of total phenolic content, antioxidant activity, and phytochemical screening from both tree barks significantly. Between two tree barks, “Kamlowelen” shows a potential to be an antioxidant agent as it exhibits similar % inhibition to ascorbic acid, however it needs to be used in higher concentration. As for “Kayu Bawang” it only has little potential to be antioxidant.

Keywords: *Antioxidant properties, Total phenolic content, Phytochemical screening, “Kamlowelen”, “Kayu Bawang”*