

## ABSTRACT

### ANTIOXIDANT TEST OF METHANOL NEAMB LEAVES (*Azadirachta indica*) OF MASERATION RESULTS USING DPPH METHOD

**Nafasa Mutiara Rian Azzuri**

*Azadirachta indica* is one of the plants in Indonesia that has a variety of benefits such as treatment. Almost all parts of the *Azadirachta indica* contain bioactive compounds, both in the stems, leaves, and seeds. Antioxidants are chemical compounds that function as inhibitors of free radical formation by preventing the oxidation reaction of the free radical chain, arresting or damaging the oxidation process, or by slowing down lipid peroxidation. Maceration is a simplicia extraction process using a solvent with several times of shaking or stirring at room temperature. The purpose of this study was to determine the antioxidant activity of *Azadirachta indica* methanol extract. This study aims to determine the antioxidant activity of *Azadirachta indica* methanol extract. The design of this study was initiated by extracting *azadirachta indica* with methanol as a solvent to concentrate and extract the extract, then the extract was made in concentrations (10, 20, 30, 40, 50 ppm). To test the antioxidant activity using the DPPH method with a concentration of ascorbic acid as a comparison solution (1, 2, 3, 4, 5 ppm), then the absorbance was measured at a predetermined maximum wavelength. In this study, from the absorbance results, it can be seen that the greater the concentration of the sample, the smaller the absorbance value obtained, and the value of % attenuation will be greater. IC<sub>50</sub> is a number that indicates the concentration of the extract which is able to inhibit the oxidation process by 50%. The smaller the IC<sub>50</sub> value, the higher the antioxidant activity. If observed based on the IC<sub>50</sub> value of *Azadirachta indica* methanol extract, it is 35.6341 ppm, while for ascorbic acid the IC<sub>50</sub> value is 5.0504 ppm. The results of the IC<sub>50</sub> value obtained that the activity of the *Azadirachta indica* methanol extract was higher than ascorbic acid. This indicates that the antioxidant activity of *Azadirachta indica* methanol extract is lower than that of ascorbic acid.

**Keywords** : *Azadirachta indica*, *Antioxidant*, *Maceration*, *DPPH*, *Asorbid acid*, *IC<sub>50</sub>*