

ABSTRACT

Wiwit Cahya Wijayaningrum, 24020121140151, “**Identification of Quercetin Flavonoid Compounds, Determination of Chlorophyll Content, and Antibacterial Activity Testing of Moringa (*Moringa oleifera* L.) Leaf Extract against *Staphylococcus aureus*.**” Under the guidance of Endang Kusdiyantini and Nurhayati.

Indonesia faces a problem with the increasing number of infectious diseases caused by pathogenic bacteria in the human body, namely *Staphylococcus aureus*. Inappropriate antibiotic treatment can lead to resistance. The high number of antibiotic resistance cases has led to the need for plants as an alternative treatment, one of which is the Moringa plant. The study aims to assess the effectiveness of ethanol extract of Moringa leaves (*Moringa oleifera* L.) at various concentrations against *Staphylococcus aureus* bacteria and to examine the effect of eluent variations in the separation of flavonoid compounds using thin layer chromatography (TLC). Extraction was carried out through the maceration method using 96% ethanol solvent, followed by antibacterial activity testing using the Kirby Bauer method on three extract concentrations (20%, 60%, and 80%), identification of flavonoid compounds using TLC with three different types of eluents (methanol: chloroform: n-hexane; ethanol: n-hexane; butanol: acetic acid: water), and analysis of chlorophyll content using a visible spectrophotometer. The results showed that Moringa leaf extract had significant antibacterial activity against *S. aureus* with the highest inhibition zone of 13.816 mm at a concentration of 80%. The highest flavonoid Rf value (0.806) was obtained from the butanol:acetic acid:water eluent, approaching the standard Rf value of quercetin (0.967), indicating the effectiveness of the most effective eluent in separating polar flavonoid compounds. The total chlorophyll content in the extract was 31.882 mg/L, which is included in the high category and has the potential to support antibacterial activity. This study indicates the potential of Moringa leaves as a source of bioactive compounds with prospects for further development

Keywords: *Staphylococcus aureus*, *Moringa oleifera*, Antibacterial, Flavonoids, Chlorophyll