ABSTRACT

Indonesia is an archipelago confronting significant challenges with water pollution, particularly those caused by domestic and industrial waste, as well as agricultural activities. One of the primary effects of water pollution is the increase in pathogenic bacteria present in water—such as *Escherichia coli* and *Salmonella*—which may threaten both human health and aquatic life. The application of natural materials that demonstrate efficacy against these bacteria could offer an alternative solution to address these issues. This study reports the presence of bioactive compounds, including flavonoids, tannins, and phenols, in the skin of Arum manis mango (*Mangifera indica*). The antibacterial activity aims to inhibit the growth of pathogenic bacteria, including *Escherichia coli* and *Salmonella,* which are commonly found in aquatic environments and domestic waste. Extraction was performed using the maceration method with 96% ethanol solvent. The antimicrobial activity was tested using the UV-Vis Spectrophotometer method. Content analysis of flavonoids in sweet arum mango peel extract yielded a result of 3.19%, indicating the significant potential of Arum manis mango skin as a natural solution for reducing pathogenic bacteria and supporting environmental management efforts.

Keywords: Water pollution, pathogenic bacteria, arum manis mango peel, antibacterial, Escherichia coli, Salmonella