

ABSTRACT

ANALYSIS OF BACTERIAL CONTAMINATION IN SAMBILOTO LEAF SIMPLICIA (*Andrographis paniculata*) USING THE TOTAL PLATE COUNT (TPC) METHOD

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Sambiloto (*Andrographis paniculata*) is a traditional medicinal plant used to treat various illness. It has active compounds, such as andrographolide and flavonoids, has potential as antibacterial agents. This study aims to evaluate the cleanliness and safety of sambiloto simplicia using the total plate count (TPC) method to determine bacterial contamination. The research stages included sterilization of equipment, preparation of growth media, dilution, and TPC testing. The results showed that the number of bacterial colonies at dilutions of 10^{-4} , 10^{-5} , and 10^{-6} were 49.6×10^4 CFU/mL, 34.3×10^5 CFU/mL, and 3.33×10^6 CFU/mL, respectively, which are within the maximum TPC limit according to BPOM No. 12 of 2014. Thus, sambiloto simplicia qualify the requirements as a natural medicinal product according to BPOM No. 12 of 2014. The results of this study indicate that Sambiloto simplicia is safe for use and has quality that meets the applicable cleanliness and safety standards.

Keywords: Sambiloto, *Andrographis paniculata*, traditional medicine, total plate count, TPC, bacterial contamination, safety standards, BPOM, antibacterial agents.