

**ANTIBACTERIAL POTENTIAL OF *Nepenthes ampullaria*
PITCHER'S CUP EXTRACT AGAINST FOODBORNE
BACTERIA**

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AUGUST 2022

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**Final Year Project Report Submitted in
Partial Fulfilment of the Requirements for the
Degree of Bachelor of Science (Hons). Biology
in the Faculty of Applied Sciences
Universiti Teknologi MARA**

AUGUST 2022

This Final Year Project Report entitled "Antibacterial Potential of *Nepenthes Ampullaria* Pitcher's Cup Extract against Foodborne Bacteria" was submitted by Faridatul Wahida Binti Saini in partial fulfilment of the requirements for the Degree of Bachelor of Science (Hons.) Biology, in the Faculty of Applied Sciences, and was approved by

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Date: August 2022

ABSTRACT

ANTIBACTERIAL POTENTIAL OF *NEPENTHES AMPULLARIA* PITCHER'S CUP EXTRACT AGAINST FOODBORNE BACTERIA

Chemical preservatives may have adverse effects on human health for preventing food deterioration and the microorganisms that cause foodborne illness. As a result of these issues, there is a rising need to identify a possibly useful, healthy preservative that can keep the foodstuff. *Nepenthes* is an interesting species because of their distinctive shape, which includes a pitcher organ for carnivorous feeding. In Malaysia, it is locally called "periuk kera." This study aimed to determine the antibacterial potential of the methanolic extract of *N.ampullaria* against foodborne bacteria which are *Bacillus licheniformis* and *Escherichia coli*. *N.ampullaria* extract was prepared at different concentrations (10, 30, 50 mg/ml) in DMSO (5%) and tested for antibacterial activity using the agar disc diffusion technique. The result for the zone of inhibition showed that extracts at 10mg/ml, 30mg/ml and 50mg/ml has antibacterial activity on *B. licheniformis* (7.00mm, 9.67mm and 11.35mm) and *E. coli* (7.67mm,9.00mm and 11.33mm) respectively. The minimum inhibitory concentration (MIC) was determined by using tube dilution method and the values obtained were 10mg/ml for both bacteria. Whereas the minimum bactericidal concentration (MBC) was determined by using Streak plate technique and the value that was obtained is 10mg/ml for *Escherichia coli* while for *Bacillus licheniformis*, there is no result obtained. This is due to the fact that the current concentration of *N.ampullaria* extracts used does not seem effective in preventing the growth of *B.licheniformis*. However, *N.ampullaria* extract possesses substantial antibacterial action against pathogenic bacteria and might be a source of another effective and useful antibacterial agent.

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