

**PHYTOCHEMICAL SCREENING AND
ANTIMICROBIAL ACTIVITY OF *Averrhoa bilimbi* AND
Averrhoa carambola LEAF AND FRUIT EXTRACT**

NURUL SHUHAILA BT ABD AZIB

**BACHELOR OF SCIENCE (Hons.) BIOLOGY
FACULTY OF APPLIED SCIENCES
UNIVERSITI TEKNOLOGI MARA**

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ABSTRACT

PHYTOCHEMICAL SCREENING AND ANTIMICROBIAL ACTIVITY OF *Averrhoa carambola* AND *Averrhoa bilimbi* leaf and fruit extract

Averrhoa carambola and *Averrhoa bilimbi* are the tropical fruit that can be used as traditional medicine for treating variety of disease. The present study was carried out to determine the phytochemical compound and antimicrobial activity of ethanolic extract of the leaves and fruit juices of *A. carambola* and *A. bilimbi*. In phytochemical screening there were seven tests which were test for reducing sugar, test for flavonoid, test for antraquinones, test for tannin, test for terpenoid, test for saponin and test for alkaloid. The results obtained demonstrate that in *A. carambola* and *A. bilimbi* leaves and fruit juices contained the same phytochemical compounds which were reducing sugar, terpenoid and saponin. The antimicrobial activity of leaves extract and fruit juices were determined by the disc diffusion method. The result obtained revealed that *A. carambola* and *A. bilimbi* leaves and fruit juices were potential against Gram positive and Gram negative bacteria. There were three concentrations used (25 mg/ml, 50 mg/ml and 100 mg/ml) for leaves extract. The result showed that *A. bilimbi* was more effective in against *S. aureus*, *B. subtilis*, and *E. coli* in both leaves extract and fruit juices. Concentration of 100 mg/ml was the best concentration for the *A. bilimbi* to inhibit the chosen bacteria. In fruit juices there showed that both fruit were more effective in against the bacteria. In conclusion, both fruit were potential in inhibiting bacteria but *A. bilimbi* showed more potent in antimicrobial activity with the range between 8-19 mm for leaves extract and 10-20 mm for fruit juices with significant value at $p < 0.05$.