

Bioactivity of *Syzygium jambos* methanolic extracts: Antibacterial activity and toxicity

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ABSTRACT

Methanol extracts from *S. jambos* leaves were tested for antimicrobial activity and toxicity. *S. jambos* leaf extract inhibited the growth of 4 of the 14 bacteria tested (29%). Both gram-positive and gram-negative bacterial growths were inhibited by *S. jambos* leaf extract, although gram-positive bacteria appeared more susceptible. Two of the 10 gram-negative bacteria (20%) and 2 of the 4 gram-positive bacteria (50%) tested had their growths inhibited by the extract. The leaf extract also proved to be toxic in the *Artemia franciscana* bioassay, with a 48-h LC₅₀ of 387.9 $\pm$ 38.8 mg/mL, making it slightly more toxic than Mevinphos (505.3 $\pm$ 37.7 mg/mL) and approximately 5-fold less toxic than potassium dichromate (80.4 $\pm$ 4.3 mg/mL). Whilst potassium dichromate's LC₅₀ remained constant across the 72-hour test period (24-h LC₅₀, 86.3 $\pm$ 5.1; 72-h LC₅₀, 77.9 $\pm$ 4.9), the extract and Mevinphos LC₅₀ values decreased by 72 hours (87.0 $\pm$ 11.3 mg/mL and 103.9 $\pm$ 12.8 mg/mL, respectively), indicating their similar levels of toxicity in the assay.

KEYWORDS

Antibacterial . medicinal plants . methanolic extracts . phytotoxicity . rose apple .
Syzygium jambos

REFERENCES

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