

## **Preliminary Phytochemical Screening and Antibacterial Activity of *Eugenia jambolana*: A Comparison between Ethanol Extract and Decoction**

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*Eugenia jambolana* belongs to the Myrtaceae (Tamil- Naval, English – *Jambolan*, Sinhala –*Madan*). Its bark with or without the addition of other astringents is used to treat chronic diarrhoea and dysentery, these are caused by microorganism such as *Escherichia coli*. Based on the above mentioned observations this study was aimed to compare the antibacterial activity of decoction and ethanolic extract of *E.jambolana* bark against *Staphylococcus aureus* (ATCC25923) *Escherichia coli* (ATCC 25922) *Pseudomonas aeruginosa* (ATCC 27853) and *Enterococcus faecalis* (ATCC 291212) and qualitative phytochemical analysis was done to test the presence of phytochemicals. The decoction possesses alkaloid, tannins, saponins, flavonoids, steroids, terpenoids, cardiac glycosides and phlobatannins. The ethanolic extract additionally possesses steroid. The antibacterial activity was carried out by using the standard cutwell diffusion method with Mueller Hinton Agar as the medium control. The diameter of the Zone of Inhibition (ZOI) was measured after 24 hours of incubation. Both decoction and ethanolic extract of *E.jambolana* showed inhibitory activity against all the tested bacteria. The diameter of ZOI is ranging from 10±0.17mm to 22±1.01mm. The decoction of *E.Jambolana* showed antibacterial activity against the tested organism ranging from 18±0.52mm to 22±1.01mm. This diameter is greater than that ZOI of ethanolic extract of *E.jambolana* (10±0.17mm to 14±0.71mm). The reason for this observation may be due to high water soluble active components in decoction. In summary the decoction of the bark of *E.jambolana* has a great inhibitory activity against the Microorganisms that can be used in treatment of infectious disease caused by *S.aureus*, *E.coli*, *P. aeruginosa*, *E.faccealis*. Further study should be carried out against a wider spectrum of organisms.

**Key Words:** Antibacterial activity, phytochemicals, *Eugenia jambolana*