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EVALUATION OF PHYTOCHEMICALS, ANTIBACTERIAL, ANTIOXIDANT ACTIVITY, TOTAL FLAVONOID, AND PHENOLIC CONTENT OF ZANTHOXYLUM ARMATUM FOUND IN PALPA DISTRICT OF NEPAL

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ABSTRACT

Zanthoxylum armatumis an important medicinal plant. This study was to analyze phytochemicals, antibacterial, antioxidant activity, TPC, and TFC quantitatively in wild fruit extract. The wild fruits of the plant were collected from the Palpa district. Fruits were shaded dried and ground and extracted with methanolic solvent by cold percolation method. The extract was then examined for qualitative and quantitative analysis. Preliminary phytochemical screening revealed the presence of flavonoids, Polyphenol, Alkaloids, steroids, Tannins, Terpenoids, Coumarins, Quinones, Glycosides, Saponins, etc. The antimicrobial activity was analyzed by the Agar Well Diffusion method, antioxidant activity was evaluated by DPPH radical scavenging assay, total phenolic content was determined by using Folin-Ciocalteu method, and flavonoid content was determined by using aluminium chloride colorimetric method. The DPPH radical scavenging activity in terms of IC_{50} value of the wild fruit sample was 51.596µg/ml. The total phenolic content was found 244.46±0.03 (mg of GAE/g),total TFC content was found 131.66±0.06(mg of QE/ g).Upon antibacterial test, the extract was more sensitive to gram-positive bacteria S. aureus (ZOI= 8 mm) but remains insensitive to E. coli.

KEYWORDS: *Z. Armatum, Rutaceae Family, Phenolic, Flavonoid, Antibacterial Analysis.*

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