**Antimicrobial Potential of *Glycyrrhiza glabra* Root Extracts**

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**Objectives:** The licorice plant (*Glycyrrhiza glabra*, Family *Leguminoceae*) has been used by physician and herbalists since the earliest of times. The main ingredient of *G. glabra* is glycyrrhizin, a substance 50 times sweeter than sucrose, with cortisone-like effects. The aim of the present study was to investigate antimicrobial potential of dichloromethane and n-hexane extracts of *G. glabra*. As far as our literature survey could ascertain, *G. Glabra* dichloromethane and n-hexane root extracts, have not been biologically investigated.


**Results:** The antimicrobial test results showed that different root extracts of *G. glabra* exhibited antimicrobial activity against twelve tested microorganisms (11 bacteria and 1 yeast). The results of disc diffusion method indicated that, the highest inhibitory activity of *G. glabra* dichloromethane and hexane root extracts was determined against *M. luteus* NRRL B-4375 (19.58 mm) and *B. cereus* RSKK 863 (17.74 mm), respectively. Also, n-hexane root extract of *G. glabra* exhibited a stronger antimicrobial activity in comparison with dichloromethane root extract in general. The minimum inhibitory concentration values for test microorganisms which were sensitive to the root extracts of *G. glabra* were in the range of 0.65-45 µg/µl.

**Conclusion:** This study indicated that dichloromethane and n-hexane root extracts of *G. glabra* showed various antimicrobial effects on the microorganisms listed above. The results indicate that *G. glabra* root extracts presents a noteworthy potential of antimicrobial activities. Therefore, *G. glabra* root extracts can be used as a natural preservative ingredient in food and/or pharmaceutical industry.

**Key words:** Antimicrobial, extract, *Glycyrrhiza glabra*, root