

The Phytochemical Investigation and Antibacterial Activity of *Ziziphus Jujuba* Mill. Fruit with Combination of *Tinospora Cordifolia* Bark

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ABSTRACT:

Ziziphus jujuba Mill., (*Z. jujuba*) or the jujube, a herbal plant used in traditional medicine, belongs to the Rhamnaceae family and is one of the most important *Ziziphus* species. In this study, the *Ziziphus jujuba* Mill. fruit was mixed with *Tinospora cordifolia* bark in the ratio of 3:4 and 4:3. The *Ziziphus jujuba* Mill. fruit was combined with inner part of *Tinospora cordifolia* bark and outer part of *Tinospora cordifolia* bark. Both the plants were extracted in Soxhlet apparatus with ethanol solvent and the crude was collected. The crude was then subjected to GCMS study, and different phytochemical compounds were found to be present which have the different activities like antibacterial, anticancer, antioxidant, antimalarial, etc. The results indicate the effective antibacterial activity of the plant extract against the bacterial strains studied. The results of the quantitative test confirmed as *Staphylococcus aureus* and *Escherichia coli* were introduced as the most and the least sensitive bacterial strains in quantitative test. In this study, it has been observed that jujube extract has less antimicrobial effect on gram positive bacteria. The results of the present study have clearly showed acceptable antimicrobial effect of this plant extract against fungi in addition to gram positive and gram negative bacteria.

Keywords : *Ziziphus jujuba* Mill's fruit, *Tinospora cordifolia* bark, Phytochemical, antibacterial activity.