

Study of Antibacterial Activities of Seeds Extract of Fenugreek (*Trigonella foenum-graecum*)

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Abstract

Background: The antibacterial activity of seeds methanol extract and hot aqueous extract of fenugreek (*Trigonella foenum-graecum*) showed the presence of activity against four species of bacteria and the methanol extract have higher activity than other extract.

Objective: To examine the antimicrobial activities of the crude methanolic extract and hot aqueous extract of seeds of *Trigonella foenum-graecum*.

Patients and Methods: We prepared three different concentrations for all extracts (75%, 50%, 25%, v/v). The study detected antibacterial activity by using well diffusion in agar technique. The study applied on the Four species of bacteria includes: *Staphylococcus aureus*, *Bacillus subtilis*, *Pseudomonas aeruginosa* and *Escherichia coli*. The study continued from September 2016 to January 2017 in the Laboratory of Biotechnology in College of Science - University of Diyala.

Results: The study showed highest antibacterial activity of methanolic extract of seeds of *Trigonella foenum-graecum* that attained highest zone of inhibition (30 mm) against *P. aeruginosa* when using (75%) concentration, while attained lowest zone of inhibition (10 mm) against *E. coli* when using (25%) concentration. Whereas the hot aqueous extract of seeds of *Trigonella foenum-graecum* that attained highest zone of inhibition (24 mm) against *P. aeruginosa* when using (75%) concentration, while don't give any effect against bacterial spp. when using (25%) concentration.

Conclusion: Antibacterial activity of methanol extract of seeds of *Trigonella foenum-graecum* was higher than the hot aqueous extract also higher than commercial antibiotic (Amikacin).

Key words: *Trigonella Foenum-Graecum*, Antibacterial Activity, Antibiotics.

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