

# Investigation of antimicrobial effects of Equisetum arvense

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**Abstract** Investigation of antimicrobial effects of Equisetum arvense extract Today, resistance to antibiotics among pathogenic bacteria is something that faced physician around the world with many problems.as much as people become aware of dangerous side effects of synthetic antibiotics, the demand for natural alternatives to these drugs will increases.plants have natural substances that lowr the risk of complications and even have beneficial side effect. Two microorganisms studied in this research, Escherichia coli, E. coli PTCC 1399, and Aspergillus niger, respectively. E. coli, a Gram-negative bacilli of the family Enterobacteriaceae and the most common cause of urinary tract infections. Aspergillus, the family Trichocomaceae, a small number of species that are allergenic. Equisetum arvense, belongs to the family Equisetaceae is. E. arvense has equistonin, Equistic acid, equtinic and saponins. The plant ash, silica is found up to 70 percent. Anti-bacterial and anti-fungal properties of this remarkable plant has been reported. At first, hydroalcoholic extract of E. arvense was prepared by maceration method. Antibacterial activity of the extract on Escherichia coli and the Aspergillus niger, using Antibioqram and well done and the average diameter of Growth inhibition zone extract was measured and recorded. MIC and MBC values of extracts were determined. diameter of Growth inhibition zone extract, the E. coli, 24 mm, for two antibiotics tetracycline and gentamicin, respectively, 25 and 17 mm is reported. MIC and MBC results for E. coli, 50 mg/ml and 100 mg/ml, respectively. E. arvense Extract on Aspergillus niger, no antifungal effect. In general it can be concluded that, E. arvense, can be used as useful medicinal, to reduce the harmful effects of chemical drugs in humans.

**Keywords :** Keywords: Aspergillus niger, Escherichia coli, Equisetum arvense, MIC, MBC.

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