

Antibacterial evaluation and preliminary phytochemical analysis of *Microcystis* sp.

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Background and Aims: The present study was designed To promote the proper use of cyanobacteria and to determine their potential as sources for new drugs. cyanobacteria , a morphologically diversified class of prokaryotic photosynthetic organisms flourish in static eutrophicated water bodies , dominate microbial assemblage through formation of blooms. the medicinal value of cyanobacteria lies in some chemical substances that produce a definite physiological action on human body.the most important of these bioactive constituents of cyanobacteria are alkaloids , tannins , flavonoids , and phenolic compounds.further investigations into secondary metabolite products of cyanobacteria identified biologically active compounds with antimicrobial properties.

Methods: *Microcystis* sp. Collected from a lake of Daneshju park in Rasht in september 2011 .then culitivated to optimise growth and produce yield of species. Enriched BG11 media was used for cultivation of *microcystis* sp.to determine the efficacy of the methanol /sonication extracts of *Microcystis* sp. In response to temperature and extract concentration, the cup plate method were repeated using bacteria *E coli*,*B. subtilis* , *S . aureus* and *p. aeroginosa*. The preliminary phytochemical screening was carried out on 99% methanol extract of sample.Dragendroff's test and Mayer's test were done to assay alkaloids ,foam test for saponins ,shinoda test for flavonoids ,ferric chloride solution test for tannins and phenolic compounds , Libermann – burchard reaction for stroid and borntrager's test for anthraquinone glycosides were done.

Results: alkalids,stroids and saponins were present in all samples.flavonoids,tannins and anthraquinone glycosides were absent in *Microcystis* sp. no inhibition was recorded with aqueous and methanolic extract in antibacterial test.

Conclusions: The present study carried out on *Microcystis* genus revealed the presence of medicinally active constituents.for example alkaloids.in general alkaloids are a broad group of heterocyclic nitrogenous compounds .they could have neurotoxic ,cytotoxic or dermatotoxic effect.to date no alkaloids have been found in *Microcystis* genus.

Keywords: Blue green algae *microcystis*; Antibacterial effect; Phytochemistry