

Abstract

Cyanobacteria contribute significantly to primary productivity by adding nitrogen into the ecosystem through nitrogen fixation. They are also used as biofertilizers, food and feed while others produce compounds that have potential biotechnological application. Samples of water were collected from the shoreline of Lake Magadi in January 2012 and isolation of cyanobacteria species that live in the hypersaline conditions of the lake carried out. The isolation was done on Aiba and Ogawa medium for halophilic cyanobacteria and identification of the isolates was based on cell and colony morphology. The effect of physicochemical factors such as salinity, pH and temperature, on the growth rate of the isolates was also investigated. Colony forming, unicellular and filamentous species were isolated. The isolates were found to exhibit tolerance to environmental extremes and hence, the ability to survive in the hypersaline and halophilic conditions of the soda lake. The data obtained may be useful to environmentalists when there is need to vary primary productivity of aquatic ecosystems.

Key words: Soda lake, cyanobacteria, cell and colony morphology, physicochemical conditions.