

البحث السابع

Effect of Zinc and Copper Toxicity on Growth and Some Metabolites of the Green Alga *Tetraselmis Chull* Butcher

بحث مشترك وغير مستمد من رسائل علمية

المجلة المنشور بها البحث

Egyptian journal of Experimental Biology (Bot.), 8(2): 183 – 192.

Hala M. Taha, Hanan A. Said, Wafaa M. Abdel –aziz, Abd El -Fattah Khaleafa

ABSTRACT

The present work aimed to study the impact of different concentrations of the two heavy metal ions zinc and copper on growth parameters, pigment content (chlorophylls a & b), protein as well as the total antioxidant activity of the green microalga *Tetraselmis chuii*. The obtained results revealed that the algal cultures with different concentrations of either Zn or Cu were significantly altered growth, chlorophylls (a&b) content, protein and the antioxidant activities. The stress effect was found to depend mainly on type, concentration of the tested element and experimental duration. Low concentrations (5 and 10 mg/l) of both zinc and copper ameliorated growth and most of the measured parameters (chlorophyll a&b, protein contents and total antioxidants activity). On the contrary, higher concentrations of Zn and Cu (than 5 and 10 mg/l) and increase in the culture period induced an inhibit ion of the previously measured parameters except that of the total antioxidant capacity. However, the stress effect of Cu was found to be more significant and prominent than that of zinc.