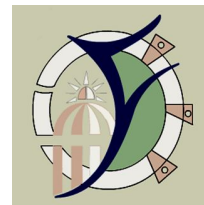




كلية العلوم



جامعة الفيوم

Ibrahim, W.M., **Karam, M.A.**, El-Shahat, R.M. and Adway, A.A., 2014. Biodegradation and utilization of organophosphorus pesticide malathion by cyanobacteria. *BioMed Research International*, Article ID 392682, <http://dx.doi.org/10.1155/2014/392682> pages:1-6

Abstract

Three strains of filamentous Cyanobacteria were used to study their growth and utilization of organophosphorus pesticide malathion. A sharp decrease in the growth of the algal strains was observed by increasing the concentration of malathion. Amongst them *Nostoc muscorum* tolerated different concentrations and was recorded as the highest efficient strain for biodegradation (91%) of this compound. Moreover, carbohydrate and protein content of their cells overtopped the other strains especially at higher concentrations. The algal strains were further subjected to grow under P-limitation in absence and presence of malathion. Although, the algal growth under P-limitation recorded a very poor level, a massive enhanced growth and phosphorous content of cells were obtained when the P-limited medium was amended with malathion. This study clarified that *N. muscorum* with its capability to utilize malathion as a sole phosphorous source is considered as an inexpensive and efficient biotechnology for remediation of organophosphorus pesticide from contaminated wastewater.