THE RESPONSE OF ALGAE TO HEAVY METAL REMOVING WITH PARTICULAR REFERENCE TO PH

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Abstract - The accumulation capacity of heavy metals by algae as affected by the pH of freshwater is the main objective of this work, which is being the first unitary study in Akre - Dhouk province Kurdistan region-Iraq. The water samples of ten selected sites in two months August and November 2016 were analyzed using Atomic Absorption Spectrometer. Bioaccumulation factor for taxa Scytonemasubcynatum, Nostocmuscarum, Batracospermumboryanum, Batracospermumatrum, Batracospermum moniliform, Spirogyra subsalsa, Oedogoniumtumidulum, Charabruunii. In water, the recorded values of heavy metals content in permissible level. In Chlorophyta and Cyanophytathe accumulation value positively correlated with pH while in Rhodophyta was negative. Consequently, the highest concentrations being registered by Oedogoniumtumidulum for Ti (1019.361 µg. l^{-1}), Cr (65.678 µg. l^{-1}), Fe(2.380 µg. l^{-1}), Co (7.846 µg. l^{-1}), Ni (205.527 µg. l^{-1}), As(12.591 µg. l^{-1}), Batracospermumboryanumfor Cu (196.257 µg. l^{-1}), Batracosoermuatrum for Hg (0.069 µg. l^{-1}), Pb (134.510 µg. l^{-1}), Batracospermum moniliform for Zn (334.508 µg. l^{-1}), Se (0.773 µg. l^{-1}), Spirogyra subsalsa, for Mn(425.292 µg. l^{-1}) Scytonemasubcynatum for Cd(0.075 µg. l^{-1}).

Keywords - Bioaccumulation, Heavy metals, Freshwater, Algae