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Bioresponsce of microalgae *Oscillatoria limnetica* to organophosphorous pesticide Glyphosate

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Abstract: The microalga species, *Oscillatoria limnetica*, isolated from the artificial canal around University of Babylon in Al-Hilla city was cultured in the laboratory using BG-11 growth medium for biomass production and to test the effect of organophosphorous pesticide glyphosate on gowth rate, doubling time and photosynthesis pigments (chlorophyll a, chlorophyll b, total chlorophyll, carotenoids, phycoerythrin, phycocyanin, allophycocyanin and phycobilliproteins).

The presence of glyphosate caused an inhibitory effect on the growth rate of *O.limnetica* and increase doubling time. Comparisons with a control, which supported 0.0361 growth rate and 8.337days doubling time, showed that the highest reduction of the growth rate was 0.0285 and the top rise of the doubling time was 10.561 days at 15mg/l of glyphosate.

In addition to, glyphosate caused inhibitory effects on photosynthetic pigments of the isolated algae.Maximum reduction of chlorophyll a, chlorophyll b, total chlorophyll and carotenoids was 0.6224, 0.1138, 0.736 and 0.143 mg/1, respectively in the presence of 15mg/1 of glyphosate. Moreover, maximum reduction of phycocyanin, allophycocynin, phycoerythrin and phycobiliproteins was 0.00207, 0.00361, 0.00165 and 0.0072mg/1 respectively, in 20mg/1 glyphosate.

Keywords: Cyanophytae, bioresponce, photosynthesis pigments, orgnophosphorous pesticide, glyphosate.

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