

ABSTRACT

Samples of microalgae were collected for monoculturing of some freshwater algae from Shalimar garden, Lahore. Samples were taxonomically identified and three microalgal species i.e. *Chlorella ellipsoidea*, *Pediastrum obtusum* and *Scenedesmus incrassatulus var. capitatus* were selected for monoculturing. Selected microalgal species were separated from other microalgae under microscope and with the help of Pasteur pipette and were collected in separate petriplates.

For monoculturing, two growth media, Bold's Basal medium and CHU# 10 medium were selected to check the growth rate and which growth medium appeared appropriate for the algal growth. Results revealed that growth of *Chlorella ellipsoidea* on BBM appeared maximum and showed higher biomass weight (2.12g) on 18th day of inoculation. It was decreased (2.12g to 1.87g) from the 18th to 21st day of inoculation. Growth rate was also decreased from 0.004g/ day to -0.006g/ day. Whereas, growth of *Chlorella ellipsoidea* on CHU# 10 medium also showed higher biomass weight on 18th day of inoculation i.e. 0.42g. It was decreased from 0.42g to 0.37g from the 18th day to 21st day of inoculation. Growth rate was also decreased from 0.001g/ day to -0.006g/ day. Net weigh gain of algal biomass (g) of *Chlorella ellipsoidea* on Bolds Basal Medium was 1.38g whereas in CHU# 10 medium it was 0.34g. Total growth rate g/ day in BBM medium was 0.053g whereas in CHU# 10 medium it was 0.015g.

In case of *Pediastrum obtusum*, growth also appeared maximum on BBM medium. Maximum biomass weight (1.15g) was observed on 18th day of inoculation. It was decreased (1.15g to 0.85g) from the 18th to 21st day of inoculation. Rate of growth was also decreased from 0.009g/ day to -0.01g/ day. In CHU# 10 medium, high biomass weight (0.38g) was also observed on 18th day of inoculation. It was decreased (0.38g to 0.35g) from the 18th day to 21st day of inoculation. Rate of growth was also decreased from 0.003g/ day to -0.02g/ day. Net weigh gain of algal biomass (g) in Bolds Basal Medium was 0.73g whereas in CHU# 10 medium it was 0.29g. Total growth rate g/ day in BBM medium was 0.028g whereas in CHU# 10 medium it was 0.20g.

In case of *Scenedesmus incrassatulus var. capitatus* maximum biomass weight (1.41g) was observed on Bold's Basal Medium on 18th day of inoculation. It was decreased (1.41g to

1.20g) from the 18th to 21st day of inoculation. Growth rate was also decreased from 0.006g/day to -0.008g/day. In CHU# 10 medium, high biomass weight (0.35g) was also observed on 18th day of inoculation. It was decreased (0.35g to 0.23g) from the 18th day to 21st day of inoculation. Growth rate was also decreased from 0.003g/day to -0.020g/day. Net weight gain of algal biomass (g) of *Scenedesmus incrassatulus* var. *capitatus* in Bold's Basal Medium was 0.94g whereas in CHU# 10 medium it was 0.26g. Total growth rate g/day in BBM medium was 0.038g whereas in CHU# 10 medium it was 0.018.