Qualitative improvement of *Chaetoceros* culture medium (stock medium) used in aquaculture by adding antibiotic in the media in phyco-lab.

Ganjoor M.S. [1*]

1-Genetic and Breeding Research Centre for Cold Water Fishes (Shahid-motahari Center), Iranian Fisheries Science Research Institute, Agricultural Research Education and Extention Organization (AREEO), Yasuj, Iran.P.O. Box: 75914-358, Yasuj city, Iran.

*Corresponding author's email: msg_isrc@yahoo.com

Abstract

Chaetocerous is a unicellular alga. In aquaculture, this algae is used as live food to feed aquaculture infants around the world. In Phyco-Lab, stock-culture of *Chaetocerous* is stored for subsequent large-scale cultivation. Guillard/2 media used to cultivate the algae. But one of the problems is the contamination of the algae's cultivation with unfavorable bacteria during long-term cultivation in Phyco-Lab, especially due to prolonged aeration and maintenance. Therefore, in order to deal with this problem, in this trial, an attempt was made to test the effect of using a kind of antibiotic in the combination of Stoke-culture medium on inhibiting bacterial growth. Therefore, three types of culture medium were tested (three treatments) two treatments with two different concentrations of tetracycline antibiotic and one without antibiotic as control. After 5 days, the total density of bacteria and algae was compared with controls. Subsequently, the results were analyzed using Anova-statistical methods. Test results showed that adding 50 mg / L of tetracycline antibiotic to the culture medium not only reduced the bacterial count by 100 times (two logs) but also had no negative effect on algal growth. Therefore, it was concluded that the presence of this concentration of this antibiotic in its culture medium limits the growth of bacteria. Therefore, in this way, it is possible to increase the quality of algae culture medium as an inoculated material for its use in large scale algal media.

Keywords: Unicellular Algae, Culture Medium for Algae, Antibiotic, Bacteria.