

عنوان مقاله:

Growing biomass of Symbiodinium sp. in Twin-Layer photobioreactor

محل انتشار:

اولین کنفرانس ملی یافته های نوین زیست شناسی (سال: 1395)

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نویسنده:

Behrouz Zarei Darki - Assistant professor of Department of Marine Biology, Tarbiat Modares University

خلاصه مقاله:

Symbiotic dinoflagellates called zooxanthellae (Symbiodinium genus) through their photosynthetic products such as oxygen, glucose, glycerol, amino acids and others can supply Cnidarians which inhabit the oligotrophic waters. In turn, Symbiodinium algae consist of different pigments which produce these organic materials. One of the most valuable pigments is peridinin which constitutes 55% of total carotenoids and protects against the harmful effect of O2. However, obtaining and cultivation of Symbiodinium was a difficult task until this problem was solved by a Twin-Layer photobioreactor which increased the production efficiency and produced an algal biomass free of bacteria. To study it in work, dinoflagellate Symbiodinium sp. CCAC 0047 was examined. The alga was cultivated in ASP12 medium and at light intensity of 100 µmol. cm-2·S-1 and temperature of 23 °C with or without supply of aeration and external carbon dioxide. The experiment result showed that the growth and biomass of alga were better on the .condition of the elevated content of CO2

کلمات کلیدی: biotechnology, algae, dinoflagellates, cultivation, carbon dioxide

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