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| (51) International classification | :C05G0003800000, A23K0050800000, C12N0001120000, A01K0061590000, A01K0063040000 | (71) Name of Applicant : 1) NLC INDIA LIMITED Address of Applicant : CENTRE FOR APPLIED RESEARCH AND DEVELOPMENT(CARD), NEY VELI, CUDDALORE DIST. TAMIL NADU, INDIA, 607 801 Tamil Nadu India 2)ANNAMALAI UNIVERSITY |
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(57) Abstract :

Aquaculture industry use cultured phytoplankton as a primary food source for the cultivable organisms. The use of phytoplankton as feed finds a struggle of high production cost in mass culture systems due to the usage of fertilizers and other chemicals. The present innovative concept is related to culturing of marine and fresh water phytoplankton with supplementation of lignite humic acid for enhanced production. In our approach lignite humic acid (supplied by Neyveli Lignite Corporation India Limited, Neyveli, Tamil Nadu, India; Patent No. D-CHE/0886) was supplemented in the culture medium for phytoplankton growth. Our experimentation with different phytoplankton growth in our formulation showed 1.5 to 3.5 fold increase in biomass. The *Litopenaeus vannamei* (shrimp) exhibited improved growth and survival rate when it is fed with phytoplankton cultured in humic acid containing medium.

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