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**Selective Enrichment of Eicosapentaenoic acid (20:5n-3) in *N. oceanica* CASA CC201 by
Natural Auxin Supplementation**

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ABSTRACT

The present study aims to evaluate the effect of different concentration of natural auxin, Indole-3 acetic acid (IAA) on growth, lipid yield, PUFA and EPA accumulation in *Nannochloropsis oceanica* CASA CC201. It was observed that the, treatment with 10ppm concentration of IAA resulted in high cell number 579.5×10^6 cells/ml than the control (215.5×10^6 cells/ml). Treatment with IAA at a concentration of 40ppm gives the highest cellular lipid accumulation of 60.9% DCW than the control 31.05% DCW). Lipid yield is also found to be increased by the addition of 40ppm IAA (319.5 mg/L) compared with the control (121.5mg/L). EPA percentage is increased to 10.76% by the addition of 40ppm IAA compared to the control (1.87%).

Keywords: Microalgae, Omega 3 fatty acids, PUFAs, Phytohormones, IAA, Nutraceuticals.

Highlights

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