



International Journal of Environment and Health Sciences

(IJEHS) 2020, VOL. 2, NO. 1

<http://www.stenvironment.org/>

Algae Derived High-Value Green Bioproducts

Sumit Sharma¹, Shikha Singh¹, Nilakshi Sarma¹, Chitra Sharma¹, Saurabh Jyoti Sarma^{1,*}, Satinder Kaur Brar^{2,3}

¹Department of Biotechnology, Bennett University, Greater Noida (UP), India

²INRS-ETE, Université du Québec, 490, de la Couronne, Québec, Canada

³Department of Civil Engineering, Lassonde School of Engineering, York University, North York (Toronto), Canada

Received on: 15.01.2020

Revised on: 31.01.2020

Accepted on: 11.02.2020

ABSTRACT

Microalgae are a renewable potential source of high-value products. The superficial activity of CO₂ sequestration and accumulation of lipids inside make it useful for large scale cultivation. Constant high energy demands and depletion of fossil fuel resources have focused on the technologies to improve biofuel yield through micro-algae development. The ability of microalgae to produce high-value products, such as DHA (docosahexaenoic acid) and EPA (eicosapentaenoic acid) helps in increasing their global demand. This review focused on production, purification of DHA, EPA and carotenoids, their operational conditions, bio-synthesis pathways, and applications.

Keywords: DHA, EPA, Carotenoids, Downstream Processing, Applications