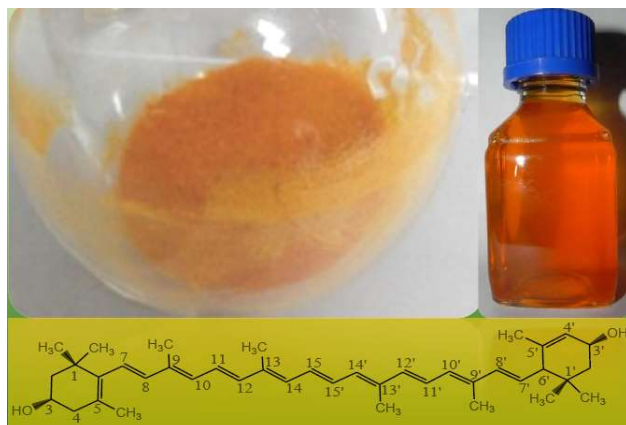




PROCESS FOR THE PRODUCTION OF LUTEIN



Lutein, is a xanthophyll carotenoid essential for protecting the cellular components of vital organs from oxidative damage. Lutein is present in higher plants and other photoautotrophic organisms like algae. NIOT isolated a fast growing, high biomass and lutein producing microalgal strain, *C Chlorella sorokiniana*, optimized a custom designed culture media, culture methodology, harvesting technique and the purification of lutein to 90-95% purity and production of “Lutein” from marine *Chlorella sorokinian*.



The major components of the technology include Marine *Chlorella sorokinian*, Custom designed culture media, Culture system, Extraction of Lutein, Purification Lutein, All-trans lutein (Molecular Mass: 569.43) etc,. The process stages are Cultivating a marine Chlorophycean microalgae *Chlorella sorokiniana* under cultivation conditions, harvesting the cultivated micro algae, Rinsing the cultivated biomass free of salts, Spray drying of algal biomass, Cell disruption, Alkaline treatment of algal biomass, Solvent extraction of crude lutein, Solvent removal and quantification of the lutein content, purification process, re-dissolving and re-extraction for storage and final product.

This technology is developed by **National Institute of Ocean Technology**, Ministry of Earth Sciences, Govt. of India and seeks to stimulate the use of technology by commercialization under Make in India Initiative and **National Research Development Corporation** will facilitate for smooth transfer and licensing of the technology with affordable Licencing terms and conditions.

Any company or organization interested in the technical know-how and to get more details about the technology please refer the contact details below.

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