

COSMETICAL

Algal products have been used in the cosmetic industry as antioxidants, sunscreens, thickening agents, skin sensitizers, moisturizing agents to enhance the competence of skin against abrasions, tanning, etc. Algae are primitive unicellular or multicellular eukaryotes, which are photosynthetic, i.e., they are primary producers harnessing energy from sunlight and converting it into chemical energy for the biosynthesis of organic compounds such as sugars. Algal species contain a green coloured pigment recognized as chlorophyll, which is an imperative component in the process of photosynthesis. These pigments assist in absorption of energy from the light source and transferring it to the reaction centre of photosystem I and II. These pigments can be differentiated into two types, chlorophyll a and chlorophyll b. Thus, carbon dioxide, water, and sunlight are utilized, to convert oxygen into sugars like glucose/starch and biomass. Algal species can withstand extreme environment conditions of pH, temperature, osmotic pressure, salinity, exposure to ultraviolet rays, anaerobiosis and are able to thrive efficiently under these diverse conditions. They are able to defend its cellular components by the counter production of primary metabolites such as oleic acids, vitamin E, vitamin B12, lutein, and zeaxanthin. Secondary metabolites are also generated under harsh conditions in which they might be present. These metabolites possess antibiotic and antimicrobial effect against pathogenic fungi and viruses. Algae are further divided into two major categories, micro-algae and macro-algae.