The findings presented in this thesis entitled “Potential of *Sargassum wightii* and *Gracilaria verrucosa* two important seaweeds as source of food and fuel through biorefinery approach” are based on the research done by the candidate at Marine Biotechnology Laboratory, Department of Botany, University of Delhi, Delhi - 110007, India.

The brown seaweed *Sargassum wightii* and the red seaweed *Gracilaria verrucosa* are two most important seaweeds of Indian coast which are being used as major source of alginate and agar respectively. After the extraction of these commercial polysaccharides, their leftover pulps are usually being thrown away which causes several environmental problems. Therefore, the present work is an attempt to find out the multiple uses of these seaweeds not only for various products but also to use leftover pulp for bioethanol production in a biorefinery approach with a zero waste concept.

The data presented in this thesis are original and the results have not been submitted for the award of any degree or diploma of this or any other University.

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