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E-460 from tide wastes using clean technologies

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Some substances, chemically complex, insoluble in water at concentrations of 5%, modified the texture of the food. These substances have in common very long chains formed by the union of sugar molecules. In general, are indigestible by the human, although portion are degraded by the microorganisms present at intestine. These substances can produce beneficial effects by reducing the levels of cholesterol. Microcrystalline cellulose (MCC) is an excipient known as E-460 by the EU regulations. E-460 is used in various products for human consumption and food industry such as stabilizers, thickeners, agent in pills, pills or tablets or insoluble fiber carrier. E-460 is inert substance and that does not cause toxicity. The FDA (food and Drug Administration) assesses the microcrystalline cellulose as a substance of General Security (GRAS). Traditionally, MCC is obtained from vegetable raw materials, but the presence of lignin makes the extraction expensive. There are marine species with high content of cellulose and low of lignin, however, there are no studies of the quantity, structure or methods to obtain cellulose. Annually tonnes of tide wastes are collected on the coast, for this reason is important convert these wastes in value-added products thus minimizing the felling of trees and environmental impact. The aim of this study is evaluated the potential of various species that compose tide wastes as an alternative raw material to obtain cellulose, and the extraction through economic and clean technologies to convert this wastes into a value-added product reducing deforestation and minimizing the environmental impact.

Biography

Ana Moral has completed her PhD from University of Córdoba and Postdoctoral studies from University Complutense of Madrid. She is full Professor in Pablo de Olavide University and principal researcher of ECOWAL. She has published more than 25 papers in reputed journals and has a patent.

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