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Development of active edible coating and biodegradable packaging for food application

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A variety of food sources polymers mainly polysaccharides, proteins, lipids can be used for the development of edible coating films. These compounds can be mixed with poly (ε-caprolactone) or poly (lactic acid) and nanocellulose as reinforcing fillers for the development of biodegradable polymers with improved physico-chemical properties. The development of coatings can increase the shelf life; preserve the physicochemical properties and sensorial properties of foods. The development of packaging is intended to replace conventional synthetic packaging. More than 30% of solid waste from packaging is related to food packaging. The development of biodegradable packaging is therefore an interest in reducing waste. The challenge for researchers is to obtain a stable film in soluble having good physicochemical properties while being biodegradable. In addition, the manufacturing cost of these films must be comparable to synthetic films. The functions of edible coating and biodegradable packaging can also be improved by the addition of various compounds such as natural antioxidants and antimicrobial compounds. Controlling the release of active compounds, improving the water resistance and the physicochemical properties are also possible by chemical modification or cross linking of these polymers. During this conference, the potential and functionality of different types of films will be presented. Examples will be reported through our research conducted in our laboratories on how to check the functionality of the films and their applications made in the food sector.

Biography

MoniqueLacroix has completed a BSc and MSc in Food Sciences Technology in 1980 and 1982 respectively and a PhD in Nutrition in 1986. She is full Professor at INRS-Institut Armand-Frappier, Laval, Québec, Canada and Director of the Research Laboratories in Sciences Applied to Food and of the Canadian Irradiation Centre. She is Fellow of the International Academy of Food Science and Technology (IAFoST). According to the ISI Essential Science Indicators web product, her work garnered the highest percent increase of total citations in Agricultural Sciences in 2005. She is author of 225 publications, 10 patents and 18 book chapters.

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