

Study of Non-Traditional Starches for Biodegradable Films with a Focus on Description and Current Uses in Packaged Foods

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Abstract

The rising consumption and inappropriate discharge of non-biodegradable plastics is increasingly alarming. The demand for biodegradable polymers has increased and starch films have become a popular option because of their availability and affordable price. Research on non-traditional starch sources has the potential to reveal unique features and substitutes for the agricultural resources now used to make bioplastics. The development and use of unconventional starch sources in films made by casting for food packaging applications has made recent strides, which are discussed in this paper. The main conclusions of applied food studies are covered, together with information on mechanical and structural qualities, moisture sensitivity and other factors. The findings show that starch films made from unconventional sources can reach comparable and even better, characteristics than traditional ones. Starch upcoming developments include research into new sources of starch, with a focus on enhanced characteristics, commercial scale-up and food uses.

Keywords: FT-IR; Mechanical properties; Permeability; Shelf life; Solvent casting

