Journal of Food Processing and Preservation

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Special Issue on

Starch Modifications for Clean Labeled Starch

CALL FOR PAPERS

Native starches are limited in their industrial applications. The quality of the food product is reduced by the heat and shear instability of the starch, as well as their tendency to degrade at low temperatures. Much research has been conducted, therefore, into enhancing starch properties through chemical modification. The increased consumption of processed and instant foods has driven significant growth in the global demand for chemically modified starch, however, chemically altered starches can have negative environmental effects and pose health hazards. This, along with the requirement of modified starches to be labelled as "modified starch" and tagged with an E-number in any food products, has limited the willingness of consumers to use modified starch-based foods. Manufacturers have responded by introducing clean-label starch-based foods to expand consumer interest and promote clean-label products.

The manufacture of clean-label starch is achieved through a combination of physical and enzymatic modification techniques and starch blending. Enzyme treatment typically has a more significant impact on starch properties, while a variety of physical modification techniques can be used. These can include ultrasound, pulsed electric field treatments, high pressure processes, hydrothermal, or pre-gelatinization treatments, including different drying and cooking techniques. These techniques can all improve a variety of starch characteristics, including morphological, thermal, rheological, and pasting properties.

Thus, this Special Issue (SI) aims to collect high-quality original research and review articles that investigate clean labeled starch modification, starch modification techniques, and food and packaging applications in the shelf life extension of food products. We seek to provide a comprehensive and up-to-date resource on clean-label starches, catering to a wide range of readers interested in starch modification and its applications in clean-label food and packaging industries.

Potential topics include but are not limited to the following:

- Modification of starch by physical, chemical, and dual/triple modification methods in line with sustainable development goals
- Starch blending with hydrocolloids
- Enzymes for clean-label starch production
- Clean labeled resistant starch
- Clean labeled starch in bakery, confectionery, dairy, and food packaging
- Shelf life and food safety analysis
- Circular economy approach
- Limitations, challenges, and consumer acceptability of clean-label starches

Authors can submit their manuscripts through the Manuscript Tracking System at https://review.wiley.com/submit?specialIssue=898762.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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