Journal of Food Processing and Preservation

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Special Issue on

Novel Processing of Pseudocereals and Millets to Improve Starch and Protein Properties

CALL FOR PAPERS

Pseudocereals and millets are gluten-free grains that are gaining popularity due to their nutritional value, resilience to climate change, and low environmental impact. Novel processing of these grains could unlock their full potential by enhancing their nutritional and functional qualities and mitigating anti-nutritional factors. Therefore, it is important to understand the effect of novel processing methods on starch and proteins in these grains. The findings can help us to develop new and improved food products with enhanced functional, nutritional, and sensory qualities.

Pseudocereals and millets have a smaller kernel size, higher fiber content, and a more complex starch structure, making them difficult to process compared to cereals like wheat or rice. Additionally, the anti-nutritional proteins of pseudocereals and millets are the least studied aspect of these grains. Despite these challenges, there is a growing interest in the use of novel processing technologies such as microwaves, cold plasma, and pulsed electric fields, among others, for the processing of pseudocereals and millets. Developing new and improved processing conditions and evaluating their effects on the quality and properties of starch and proteins in processed grains could provide substantial improvements.

This Special Issue welcomes both original research and review articles exploring the effect of novel processing on starch and proteins in pseudocereals and millets. Studies utilizing traditional methods assisted by novel technologies are also welcome. Reviews on research trends and the current status of novel modification methods for pseudocereals and millets will be considered, while manuscripts that are only focused on product development and where the roles of starch and protein are not explored are not appropriate for this Special Issue.

Potential topics include but are not limited to the following:

- Novel processing of starch and protein
- Traditional processing assisted by novel technologies
- Genetic and breeding strategies
- Starch and protein digestibility
- Anti-nutritional protein
- In vitro studies and clinical trials
- Rheological behavior of starch and protein
- Flour quality and flowability
- Novel applications of processed starch and protein
- Role of processed starch and protein in food structure and functionality

Authors can submit their manuscripts through the Manuscript Tracking System at https://review.wiley.com/submit?specialIssue=371200.

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

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