The Structural Properties, Modifications, and Nutritional Applications of Starch

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Deadline for manuscript submissions:
closed (31 January 2023)

Message from the Guest Editors

Dear Colleagues,

Starch is an important carbohydrate with widespread applications in human food, animal feed and many industrial products. It is synthesized in higher plants as insoluble semicrystalline granules assembled by amylose and amylopectin. The variations in starch structure among different plant species affect the physicochemical properties and end-use functions of starch. The demand for starches with particular nutritional properties is increasing, but the ability to produce novel starches is still limited. Starches with specific nutritional properties can be obtained by chemical/physical/enzymatical/genetic modifications. However, this requires further understanding of the structure–nutritional properties relationships of starch. A better understanding of these relationships provides direction for starch modification and targeted programs to produce starch with desired characteristics. This special issue focuses on the roles of starch modification for enhanced nutritional outcomes through lowing the digestion rate/extent or interactions with gut microbiome.

Special Issue

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Message from the Editor-in-Chief

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