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Polyphenols in Plant-Based Foods: Effects of Food Processing on Their Content, Bioaccessibility, Bioavailability, and Bioactivity

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Message from the Guest Editor

Polyphenols, which are widely distributed in plants and plant-derived foods, are the most abundant dietary antioxidants. Their presence is related to protective effects on health and their biological activity depends on their bioaccessibility and bioavailability. Bioaccessibility and bioavailability differ greatly among various chemical structures of polyphenols and are associated with the characteristics of food source and matrix interactions. Food processing (including green extraction technology) induces physical and chemical changes to foods, resulting in both positive and negative impacts on the quality of the products. Polyphenols have demonstrated sensitivities to many conditions encountered through food processing, which means that both the form and content of polyphenols are affected. In fact, food processing can produce degradation of polyphenols; however, it is possible to counteract it by modulating the operating conditions in favor of increased bioaccessibility and bioavailability. It is critical to consider how food processing may alter content, bioaccessibility, bioavailability and biological activity of polyphenols.



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Special Issue



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Message from the Editor-in-Chief

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