A Review on the Potential Bioactive Components in Fruits and Vegetable Wastes as Value-Added Products in the Food Industry

ABSTRACT

The food production industry is a significant contributor to the generation of millions of tonnes of waste every day. With the increasing public concern about waste production, utilizing the waste generated from popular fruits and vegetables, which are rich in high-added-value compounds, has become a focal point. By efficiently utilizing food waste, such as waste from the fruit and vegetable industries, we can adopt a sustainable consumption and production pattern that aligns with the Sustainable Development Goals (SDGs). This paper provides an overview of the high-added-value compounds derived from fruit and vegetable waste and their sources. The inclusion of bioactive compounds with antioxidant, antimicrobial, and antibrowning properties can enhance the quality of materials due to the high phenolic content present in them. Waste materials such as peels, seeds, kernels, and pomace are also actively employed as adsorbents, natural colorants, indicators, and enzymes in the food industry. Therefore, this article compiles all consumer-applicable uses of fruit and vegetable waste into a single document.