

Gardenia Yellow Pigment: Extraction Methods, Biological Activities, Current Trends, and Future Prospects

Shipeng Yin^{*}, Liqiong Niu, Jian Zhang, Yuanfa Liu^{*}

Abstract

Food coloring plays a vital role in influencing consumers' food choices, imparting vibrant and appealing colors to various food and beverage products. Synthetic food colorants have been the most commonly used coloring agents in the food industry. However, concerns about potential health issues related to synthetic colorants, coupled with increasing consumer demands for food safety and health, have led food manufacturers to explore natural alternatives. Natural pigments not only offer a wide range of colors to food products but also exhibit beneficial bioactive properties. Gardenia yellow pigment is a water-soluble natural pigment with various biological activities, widely present in gardenia fruits. Therefore, this paper aims to delve into Gardenia Yellow Pigment, highlighting its significance as a food colorant. Firstly, a thorough understanding and exploration of various methods for obtaining gardenia yellow pigment. Subsequently, the potential functionality of gardenia yellow pigment was elaborated, especially its excellent antioxidant and neuroprotective properties. Finally, the widespread application trend of gardenia yellow pigment in the food industry was explored, as well as the challenges faced by the future development of gardenia yellow pigment in the field of food and health. Some feasible solutions were proposed, providing valuable references and insights for researchers, food industry professionals, and policy makers.