

The Utilization of Tea Extract within the Realm of the Food Industry

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Abstract : Tea, a beverage widely cherished across the globe, has captured the interest of scholars with its recent acknowledgement for possessing noteworthy health advantages. Of particular significance is its proven ability to ward off ailments such as cancer and cardiovascular afflictions. Moreover, within the realm of culinary creations, lipid oxidation poses a significant challenge for food product development. In light of these aforementioned concerns, this present discourse turns its attention towards exploring diverse methodologies employed in extracting polyphenols from various types of tea leaves and examining their utility within the vast landscape of the ever-evolving food industry. Based on the discoveries unearthed in this comprehensive investigation, it has been determined that the fundamental constituents of tea are polyphenols possessed of intrinsic health-enhancing properties. This includes an assortment of catechins, namely epicatechin, epigallocatechin, epicatechin gallate, and epigallocatechin gallate. Moreover, gallic acid, flavonoids, flavonols and theaphlavins have also been detected within this aromatic beverage. Of these myriad components examined vigorously in this study's analysis, catechin emerges as particularly beneficial. Multiple techniques have emerged over time to successfully extract key compounds from tea plants, including solvent-based extraction methodologies, microwave-assisted water extraction approaches and ultrasound-assisted extraction techniques. In particular, consideration is given to microwave-assisted water extraction method as a viable scheme which effectively procures valuable polyphenols from tea extracts. This methodology appears adaptable for implementation within sectors such as dairy production along with meat and oil industries alike.

Keywords : camellia sinensis, extraction, food application, shelf life, tea

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