

Title Role and evolution of fruit phenolic compounds during ripening and storage
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Citation Stewart Postharvest Review, Volume 2, Number 2, April 2006, pp. 1-7(7)
Keyword polyphenol; flavonoid; phenolic acid; biosynthesis; fruit quality

Abstract

Purpose of review: Phenolics have many different aspects that affect fruit quality, with possible effects on human health. Therefore, it is important to understand the evolution of phenolic compounds in fruits and how they change under certain environmental conditions. This article reviews recent publications on fruit phenolics, their evolution during fruit ripening and their changes under storage conditions or with artificial treatments.

Recent findings: Recent studies have reported on: (1) the development of an analytical method for measuring phenolics, facilitating monitoring of individual changes in phenolics and their response to environmental factors or treatments; (2) the activation of phenolic metabolism in a level of gene expression; (3) attempts to increase the phenolic content of fruits for different purposes including, improvement of fruit colour and resistance to pathogen, with the expectation of health improvement effects.

Directions for future research: Progress in understanding the role and evolution of phenolics in fruits will improve the ability to control the metabolism of phenolics and modify their profile during ripening and storage. However, difficulties still exist in the control of phenolics since they have several different effects on fruit quality. Future research needs to focus on identifying the appropriate level of individual phenolic required to maintain or to increase fruit quality and developing an appropriate method for activating the target biosynthetic pathway.