

Novel studies of Djulis after processing based on functional compositions

Pi-Jen Tsai^{1,*}, Jing-Yu Chen¹, Chia-Jung Li¹ and Kanjana Narkprasom²

Abstract

Recently, Djulis (*Chenopodium formosanum*) has been highlighted in Taiwan due to its high amount of functional compositions. Among them, betanin pigment is the major index of qualities for consumer. However, the red color is quite unstable. Therefore, we reviewed some of the quality changes of the color and related antioxidant capacities during processing, such as pH, alcohol or acid addition, nano-grinding, and HPP (high pressure processing) for non-thermal pasteurization. Since Djulis is assumed as pseudocereal, most of the materials were applied in the baked foods. Therefore, some novel study about the changes of functional composition as well as their health benefits for example, α -amylase inhibition, AGEs (advanced glycation end products) inhibition, methylglyoxal (MG) scavenging after baking will also be discussed.

Keywords: Djulis; betanin stability; functional composition; processing condition

¹ Department of Food Science and technology, Agricultural College, National Pingtung University of Science and Technology, Taiwan.

² Faculty of Engineering and Agro-Industry, Maejo University, Thailand.

* Correspondence: pijen@mail.npust.edu.tw