

Title Varietal differences in phenolic content and astringency in skin and flesh of hardy kiwifruit resources in Japan

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Citation Scientia Horticulturae, Volume 120, Issue 4, 19 May 2009, Pages 551-554

Keywords *Actinidia arguta*; Phenolic content; Astringency; Fruitskin

Abstract

Varietal differences in the total phenolic content and astringency in the skin and flesh were determined among the cultivars and local collections of hardy kiwifruit with a ploidy variance found in Japan. The average values of the total phenolic content in the skin and flesh were 2.66 and 0.18 g 100 g⁻¹ FW, respectively. There were large varietal differences in the total phenolic content in the skin in the range of 1.3–5.0 g 100 g⁻¹ FW. Kochi (tetraploid), while Gassan and ‘Mitsuko’ (hexaploid) contained a larger amount of total phenolics. High astringency was found in Gassan, ‘Mitsuko’ and ‘Hoko’ (hexaploids) and Kochi. HPLC analysis showed that the major components of phenolics in the flesh were (+)-catechin, chlorogenic acid, rutin, (-)-epicatechin and quercetin.