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Quantification and Varietal Variation of Rutin in Mulberry Fruits

Kim Hyun-bok¹, Kim Sun-lim², Sung Gyoo-byung¹, Hong In -pyo¹ and Nam Hack-woo¹

¹*Department of Agricultural Biology, National Institute of Agriculture Science and Technology, Rural Development Administration, Suwon 441-100, Korea and* ²*National Institute of Crop Science, Rural Development Administration, Suwon 441-100, Korea.*

Rutin has many beneficial effects on human health. It was established that rutin antagonizes the increase of capillary fragility associated with hemorrhagic disease, reduces high blood pressure, decreases the permeability of the vessels, and has an antiedema effect, reduces the risk of arteriosclerosis, and shows antioxidant activity.

Rutin analysis with mulberry fruits was carried out by high-performance liquid chromatography (HPLC) to reveal the possibility of source of functional food. As a result, mean content of fifty accessions was 0.14 ± 0.050 % DW. Among the tested fifty accessions, 'Sabangso' was showed the highest rutin in 0.29 %, whereas 'Simseol' was the lowest content in 0.05 %. Also, we researched the change of rutin content according to harvested date. The rutin contents of earlier harvested groups were higher than later harvested groups.

Simultaneously, fruity characteristics as well as rutin content were researched and analyzed to select the functional mulberry varieties for the production of fruit. From the six accessions which were contained high rutin content, we selected three suitable varieties such as 'Ficus', 'Kangsun', and 'Palcheongsipyung'.