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Volatile constituents profiling in the native and cultivar Chamoes *(Cucumis melo var. makuwa)*

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Gotgam Chamoe, a native oriental melon in Korea, is known to possess the aroma of a dried persimmon, an agronomic relevance for melon breeding program. The quantitative distribution of components were investigated in cultivar (Ohbokggul) and native (Gotgam) Chamoes for development and application of solid-phase micro extraction method (SPME). The volatile components were analyzed by gas chromatography-mass spectrometry and identified by comparison with the mass spectra in the literature. A total of 69 volatile components were identified and quantified, and 28 volatile compounds were specific to either the cultivar Chamoe or the native Chamoe. The amounts of volatile alcohol, unsaturated hydrocarbon, and ketone compounds were 2.2, 1.3, and 1.2 times higher in Gotgam Chamoe, respectively, and that of saturated hydrocarbon volatiles were 2.4 times higher in Ohbokggul Chamoe, whereas the total amounts of esters were similar. Among them, the functional groups of major components were ester and alcohol, including 2-methyl-1-butyl acetate (131/115/44 or 131/61/44 m/z), n-butyl acetate (117/101/44 or 117/61/44 m/z), and 3-methyl-1-butanol (89/71/43 m/z). As a result, volatile compounds were formed differently in the two Chamoes within different parts of the fruits, which contributes to aromatic differences between cultivar and native melon fruits.

Biography

Soon Sung Lim, PhD. was born in South Korea in 1966.He started his graduate studies at The Korea University and Seoul University. He published his first paper in 1996 on the synthesis of a thermodynamic compound as a pigment. He received his Ph.D. in 2000 for the development of the natural products and synthetic compounds for the treatment of diabetes or it's complications and began his independent academic career at the Hallym University in 2003. Professor Lim's research interests involve natural products (particularly the isolation and target selection from mixture), the chemistry of fortified food materials and mass spectrometry.

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