

Investigation of Conditions for DNJ Extraction from Mulberry Leaves, Silkworm powder and Silkworm Feces and Determination of DNJ Content in Mulberry Leaves

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Conditions for extraction of DNJ (1-deoxynojirimycin) from mulberry leaves, silkworm powder and silkworm feces were investigated for the purpose of almost perfect extraction in time-saving manner. Double extraction with 10mL of distilled water took out over 99% of DNJ from 0.1g of all kind of samples tested by shaking extraction at room temperature. Though low temperature put limit on the yield of extraction, there was not severe difference over room temperature (24°C). Seasonal change of DNJ content in leaves of Chong-Il ppong, the most popular variant of *Morus* genus (mulberry) in South Korea, was determined in three sections; one-seventh part at the top of stem (upper part), the next two-seventh (middle part) and the rest at the bottom (bottom part). High content of DNJ in young leaves may make it possible to infer its protective role in *Morus* genus. Moreover, it is also noteworthy that DNJ contents in middle and bottom part are declined in the similar way. Leaves of eight variants of *Morus* genus were taken during July to August for 24 times and DNJ contents were quantified. Chung-Ol ppong variant contained relatively high level of DNJ.