

The Physicochemical Properties in *Camellia japonica* L. Leaf According to it's Gathering Time

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The purpose of this study was to analyze the nutritional value and physiological effects of *Camellia japonica* L. leaf. *Camellia japonica* L. leaf were gathered in April and May. The amount of crude ash and crude fiber was lower than those leaf of last year. The amount of crude protein, crude fat and ascorbic acid was decreased as the gathering time was delayed. Only fructose, glucose and sucrose were found and the total amount of them was increased as the gathering time was delayed. Citric acid, tartaric acid, succinic acid and acetic acid were detected and the amount of total acids was increased as the gathering time was delayed. Major free amino acids were aspartic acid, glutamic acid and histidine and the total amount of them was decreased as the gathering time was delayed. The ratio of essential amino acids to the total free amino acids was 48.69~49.69% and it was not changed according to the gathering time. Major total amino acid was histidine and alanine and the amount was decreased as the gathering time was delayed. The ratio of essential amino acid to the total amino acid was 56.37~63.88% and it was increased as the gathering time was delayed. Minerals such as P, Ca, K, Na, Fe. were detected and the amount was increased as the gathering time was delayed. Catechin of *Camellia japonica* L. leaf was composed of EGC, EGCG, catechin and EC, and the amount of catechin was decreased as the gathering time was delayed. The amount of chlorophyll and total polyphenol was increased as the gathering time was delayed. The Hunter's color, L value was decreased as the gathering time was delayed while a value and b value was increased.

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