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Clinical studies about an antioxidation effect for a source on internal enzymatic index

酵素に対する抗酸化効果、体内の酵素指数に関する臨床研究

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We examined an internal enzymatic index using serum to review mechanism of enzymatic antioxidation action. The effects of cellulose crystallinity, hemicellulose, and lignin on the enzymatic hydrolysis of *Miscanthus sinensis* to monosaccharides were investigated. A airdried biomass was ground by ball-milling, and the powder was separated into four fractions by passage through a series of sieves with mesh sizes 320 μ m, 220 μ m, 130 μ m, and 63 μ m. Each fraction was hydrolyzed with commercially available cellulose and glucosidase. The yield of monosaccharides increased as the crystallinity of the substrate decreased. The addition of xylanase increased the yield of both pentoses and glucose. Delignification by the sodium chlorite method improved the initial rate of hydrolysis by cellulolytic enzymes significantly, resulting in a higher yield of monosaccharides as compared with that for untreated samples. When delignified *M. sinensis* was hydrolyzed with cellulase, glucosidase, and xylanase, hemicellulose was hydrolyzed completely into monosaccharides, and the conversion rate of glucan to glucose was 90.6%.

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vitamin D receptor