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[\[PDF \(289K\)\]](#) [\[References\]](#)**Conversion from 1,5-Anhydro-D-Fructose into Functional Compound, Ascopyrone P by Heating**Kazuhiro Yoshinaga¹⁾, Chinami Wakamatsu¹⁾, Yuzo Saeki¹⁾, Jun-ichi Abe²⁾ and Susum Hizukuri²⁾

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Radical scavenger activity of the heated, aqueous solution of 1,5-anhydro-D-fructose was higher than that of non-heated one. The reason was ascopyrone P, which had 500-fold stronger radical-scavenger activity than 1,5-anhydro-D-fructose, was derived from heat treatment. Gradual conversion of 1,5-anhydro-D-fructose into ascopyrone P seemed one of the key for the long-lasting, antioxidative action of 1,5-anhydro-D-fructose preparation. Efficient production of ascopyrone P was achieved by heat treatment, namely, 50% of 1,5-anhydro-D-fructose was converted by the reaction at 155°C for 5 min. In foods, ascopyrone P was produced by retort cooking of the materials containing 1,5-anhydro-D-fructose, such as truffle and red seaweed *Gracilaria verrucosa*. Alternatively, the derivative (approximately 20 µg) was synthesized on baking or frying of foods (1 g) containing glucans, starch or cellulose.

Key words: 1,5-anhydro-D-fructose, ascopyrone P, antioxidant[\[PDF \(289K\)\]](#) [\[References\]](#)Download Meta of Article [\[Help\]](#)[RIS](#)[BibTeX](#)

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