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## **Effects of High Pressure on Softening of Japanese Radishes and Decomposition of Pectin during Thermal Process**

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The softening of Japanese radishes and the decomposition of pectin in 1/10 M phosphate buffer, pH 6.5) during the thermal process (1 atmospheric and high pressures (100 MPa-400 MPa) were investigated. High pressures decreased the rates of softening for Japanese radishes and the decomposition of pectin during the thermal process. The activation volumes for the softening were 4.3 cm<sup>3</sup>/mol at 100°C and 3.1 cm<sup>3</sup>/mol at 110°C, and those

of pectin were  $10.4 \text{ cm}^3/\text{mol}$  ( $100^\circ\text{C}$ ) and  $8.1 \text{ cm}^3/\text{mol}$  ( $110^\circ\text{C}$ ). This indicated that the pressure lowered the pectin decomposition more rapidly, the ratios of the activation volume at  $110^\circ\text{C}$  to that at  $100^\circ\text{C}$  were nearly the same. These results suggested that the resistance to softening by pressure is closely related to the inhibition of the pectin decomposition by pressure.

**Keywords:** [high pressure](#), [thermal process](#), [Japanese radish](#),  [\$\beta\$ -eli](#)

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