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[\[PDF \(548K\)\]](#) [\[References\]](#)**Optimization of Microwave-assisted Extraction of Polysaccharides from the Fruiting Body of Mushrooms**Yuuichi Ookushi¹⁾, Masahiro Sakamoto¹⁾ and Jun-ichi Azuma¹⁾

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Microwave irradiation in the presence of water was applied for extraction of polysaccharides from the fruiting body of *Hericium erinaceum*, a mushroom called *Yamabushitake*. In this study, the effects of microwave irradiation temperature and time on solubilization of polymers in *H. erinaceum* were investigated. The results indicated that the degree of solubilization of polymers proceeded with an increase in heating temperature up to 200°C, although the polymers solubilized gradually depolymerized with the increase in heating temperature. The results also suggested that lengthening irradiation time had effects on solubilization of polymers similar to the increase in heating temperature. Comparison of the results obtained by microwave-assisted extraction with those obtained by extraction using conventional external heating indicated that extractability of the former extraction for 5 min at 140°C was almost equivalent to that of the latter extraction for 6 h at 100°C. This result suggests that microwave irradiation has an advantage for extraction of polysaccharides from the fruiting body of mushrooms in terms of extraction time.

Key words: microwave irradiation, polysaccharides, mushroom[\[PDF \(548K\)\]](#) [\[References\]](#)Download Meta of Article [\[Help\]](#)[RIS](#)[BibTeX](#)

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