

ISOLATION AND CHARACTERIZATION OF POLYSACCHARIDES FROM THE FRUITING BODY OF *GANODERMA RESINACEUM*

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Basidiomycetes of the genus *Ganoderma* (Ganodermataceae) have a trimitic hyphal system, consisting of binding, skeletal, and generative hyphae. All *Ganoderma* spp. cause white-rot, because they degrade woody cell walls, with selective delignification and simultaneous rot. We now describe the isolation and partial characterization of the polysaccharides from *Ganoderma resinaceum*. They were obtained from the fruiting bodies via successive aqueous and alkaline extractions, and fractionation by freeze-thawing. The water-soluble fractions contained glucose as the main monosaccharide, and spectral similarities were found when analyzed by ¹³C-NMR. Due to their heterogeneity, these fractions were purified by precipitation with HOAc at pH 5.0, affording precipitates and supernatants. ¹³C-NMR spectra of the supernatant fractions contained C-1 signals at δ 103.4 and 103.1, corresponding to units of β -Glc_p. Signals from 3-O-, 4-O-, and 6-O-substituted β -Glc_p units were observed at δ 85.3, 79.7 and 79.5, and 69.4, respectively. Substituted -CH₂-6 groups were confirmed by an inverted peak in its DEPT spectrum. According to the chemical data, the HOAc soluble fractions contained a similar β -glucan with (1→3)-, (1→6)- and (1→4)- glycosidic linkages. Additional structural studies on these fractions are being carried out using NMR spectroscopy and methylation analysis.

Supported by PICV/UNIOESTE and Fundação Araucária-PRONEX.