

CHARACTERIZATION OF POLYSACCHARIDES FROM *CLONOSTACHYS ROSEA*

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Clonostachys rosea is a mycoparasite of several plant pathogenic fungi. We investigated the structures of the carbohydrates of its biomass. Defatted mycelium was submitted to sequential aqueous and alkaline extractions. Fractions obtained by KOH extraction were purified through a freeze-thawing procedure, furnishing several precipitates and supernatants. Water-insoluble fractions had glucose (~90%) as the main monosaccharide, suggesting the presence of a glucan, while the water-soluble fractions contained glucose, mannose and galactose. Due to the similarity shown by GC-MS analysis, all water-insoluble fractions were combined to give fraction PGD, while all water-soluble fractions were combined to give fraction SGD. The ^{13}C -NMR spectrum of the PGD fraction showed C-1 signals at low field at δ 102.6-102.9 and δ 85.0, suggesting a β -glucan with (1 \rightarrow 3) linkages. The ^{13}C -NMR spectrum of the SGD showed C-1 signals at δ 103.5-96.6, which corresponds to piranosidic units, while signals at δ 108.6-106.1 are characteristic of galactofuranosyl units. Due to the heterogeneity of the SGD fraction, it was purified by dialysis and ultrafiltration, giving fraction (MRTZR-ND), which contained glucose as the main monosaccharide. A ^{13}C -NMR spectrum of the MRTZR-ND fraction showed C-1 signals at δ 99.8 and 98.6, suggesting an α -configuration. Signals at 78.3 and 77.7 correspond to a substituted C-4. Methylation analysis showed a highly branched structure, containing the non-reducing end of Glc p , besides 4-O and 2,4-di-O-substituted units of Glc p .

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