Comparative analyses on polysaccharides of the fruit body from *Lentinula edodes* and *Lentinula boryana*

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Many studies of the Shiitake mushroom, *Lentinula edodes*, have been done over the last few decades. The β-D-glucan-(1$\rightarrow$ 3) type polysaccharides from this mushroom have shown activity against several diseases, stimulating interest in cultivation of the mushroom and the preparation of extracts from it. *Lentinula boryana* is a Shiitake-like mushroom native to the Americas that has received little attention, with no attempts to characterize the polysaccharides of the fruiting body. This study, which uses mushrooms produced in eucalyptus logs by EMBRAPA-FLORESTAS-PR, intends to compare the polysaccharides of the fruiting bodies of *L. edodes* and *L. boryana*. Polysaccharides were extracted with hot water for 2 h, followed by precipitation in cold ethanol. The yield of precipitate in cold ethanol was 64.8 mg/g of dry fruit body of *L. edodes* and 28.1 mg/g of *L. boryana*. The protein content in the samples was very similar for both mushrooms, being around 60 mg/g of precipitate. The monosaccharide composition was determined by GC-MS (column DB-225) as alditol acetate derivatives. The precipitate of L. edodes was composed mainly of glucose (60.2%), galactose (20.2%) and mannose (11.4%), with smaller proportions of fucose (3.8%) and ribose (2.8%), and 1.6% of other sugars. The precipitate of *L. boryana* contained glucose (70.7%), galactose (15.3%), mannose (8.7%), fucose (1.5%), ribose (1.4%), arabinose (1.2%) and 1.2% of other sugars. The next step will be GPC analysis, to compare the molecular size and to define the homogeneity of the polymers, and methylation and NMR analysis to determine the structures.

ANEXO 12

go Faria, 20:07 30/07/03 +0, resumo caxambu / SINAFERM RODR

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