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Fruiting bodies of cultivating mushroom *Pleurotus ostreatus* as the source of immune active polysaccharides

Oyster mushrooms (genus *Pleurotus*) are widely cultivated for food over the world. Their fruiting bodies are edible, rich of proteins and vitamins, delicious and used in culinary as desirable ingredient. However, they are also known as the source of medically important cell wall polysaccharides. For example, pleuran, an insoluble β-D-glucan, has been demonstrated potent immune modulating properties. This work is focused on isolation and structural characterization of polysaccharide fractions from basidiocarps of well cultivated oyster mushroom *Pleurotus ostreatus* SPOPPO. The fractions were obtained by subsequent extracting with water, dimethylsulphoxide and alkali solution. The water extracts were further fractionised by preparative chromatography. All the purified products obtained were characterised by spectroscopic and separation methods. It was found that starch-like α-glucan, highly branched 2-O-β-D-manno-3-O-methyl-(1→6)-α-D-galactan and linear (1→6)-β-D-glucan are the main component of the water extract; linear (1→3)-α-D-glucan and branched (1→3)(1→6)-β-D-glucan (soluble in DMSD) were found at various ratios in the other extracts. The insoluble residue was identified as the complex of chitin and (1→3)-β-D-glucan.

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