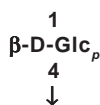
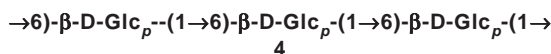


STRUCTURAL ANALYSIS OF A BIOLOGICALLY ACTIVE GLUCAN ISOLATED FROM THE ALKALINE EXTRACT OF AN EDIBLE MUSHROOM *PLEUROTUS SAJOR-CAJU*

GOUTAM MAHATA AND SADHAN KUMAR ROY

Polysaccharides from mushrooms have drawn the attention of chemists and immunobiologists on account of their immunomodulatory properties. Taking into account the usefulness of mushroom polysaccharides as immunomodulators and with a view to studying the immunological parameters, structural and some biological study of a glucan isolated from the fruiting bodies of Pleurotus sajor-caju were carried out. A polysaccharide was isolated from the fruiting bodies of the mushroom Pleurotus sajor-caju by hot alkaline extractions. The size exclusion chromatograms presented a single peak showing a molecular weight of 155 kDa. On the basis of acid hydrolysis, methylation analysis, and NMR analysis (¹H, ¹³C, HMBC), the structure of the polysaccharide was established. The polysaccharide was composed of glucose and the methylation analysis showed that the units were (1→4), (1→6)-linked. ¹H NMR spectroscopy revealed that the linkages were of β-type. The polysaccharide was composed of a repeating unit with a structure as below:



This polysaccharide possesses macrophage activity on mouse monocyte cell line.
