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OXIDATION OF β -D-GLUCAN EXTRACTED FROM BAKER'S YEAST *SACCHAROMYCES CEREVISIAE*: PHYSICO-CHEMICAL AND STRUCTURAL PROPERTIES

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Abstract: This study was carried out to promote the oxidation of β -glucan from yeast cell wall (*Saccharomyces cerevisiae*) with ascorbic acid and hydrogen peroxide at concentration levels of 0.18% AH₂ and 0.9% H₂O₂ in 5 h reaction time, and evaluate physico-chemical, functional and structural properties of oxidized β -glucan with in vitro tests. Results showed that carbonyl content, water binding capacity, solubility in water and average molecular weight were not significantly affected by the oxidative treatment. However, the decrease in swelling power was observed in the oxidised β -glucan with hydrogen peroxide. Moreover, structural characterization revealed that oxidised β -glucan with hydrogen peroxide was more pure than native and oxidised β -glucan with ascorbic acid. Therefore, it is necessary to determine the influence of the oxidative treatment of yeast β -glucan on its technological properties in food products, and biological functions should be tested with in vivo studies.