

Effect of Salt Stress on the Production and Properties of Extracellular Polysaccharides Produced by *Cryptococcus laurentii*

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The composition, main structural features and molecular properties of exopolysaccharides (EP) produced by *Cryptococcus laurentii* var. *laurentii* CCY 17-3-16 under optimal (EPo) and NaCl-stress conditions (EPs) as well as their subfractions isolated by gel chromatography were studied using chemical, FT-IR and NMR spectroscopy methods. The results showed that under stress conditions the yeast produced EP with a lower content of protein and phosphorus. In comparison to EPo, the EPs exhibited a substantially larger proportion of high molecular mass populations. NMR analysis of EPs revealed a higher degree of branching with single xylose side chains of the heteromannan components. The increase of the molecular mass and degree of branching of the macromolecular chains of the heteromannan components might in part be related to the function of EPs to protect the yeast cells from water loss and maintain growth conditions under the salt stress.

Key words: *Cryptococcus laurentii*, Salt Stress, Exopolysaccharides