

Exopolysaccharide synthesis by rhizospheric bacteria of *Pseudomonas* genus

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Abstract. The aim of the research was a study of quantitative bacterial exopolysaccharide (EPS) synthesis, and some of its properties for 5 strains of fluorescent pseudomonads isolated from soybean rhizosphere soil. The EPS yield of pseudomonad strains was equaled 3.99-5.74 g/L. The highest yield of polysaccharide on media with glucose as a carbon source per one biomass unit ($R=4,88$) was obtained for *Pseudomonas* sp. strain 6/1. The most relative viscosity was observed for the EPS of strain 8. The presence of absorption bands typical for hydroxyl (OH), eteric (C-O) groups and the absence of carboxylic (COOH) or etheric (COOR) groups allow to conclude that investigated EPS are probably levan polymers. Sulfur-containing groups (-C-S- or -S-S-) in EPS chains of pseudomonads make these bacteria and their EPS the prospective biotechnological objects for practical use in agriculture and medicine.

Keywords: *Pseudomonas*, exopolysaccharide, IR-spectra
