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**INFLUENCE OF CARBON SOURCES ON THE PRODUCTION
AND CHARACTERIZATION OF THE EXOPOLYSACCHARIDE (EPS)
BY *Bacillus sphaericus* 7055 STRAIN**

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Abstract

In this study, EPS produced by five *Bacillus* spp. strains was determined. The only one strain (*B. sphaericus* 7055) was selected due to its high EPS production and it was investigated by growing this strain in LB broth medium containing various carbon sources. The highest EPS production of this strain was found in medium containing fructose. However, the effect of different concentrations of fructose and molasses on EPS production by the strain was studied. The maximum EPS yield of the strain 7055 was recorded with 2.5% (w/v) fructose, also the highest EPS production was found in 2.5% (w/v) molasses. The strain 7055 was found to contain (98.6%) galactose and (1.4%) glucuronic acid in control medium whereas the composition of the strain 7055 [2.5% (w/v) fructose] was found to be (99.9%) neutral sugar and (0.1%) Glucuronic acid while the strain 7055 [2.5% (w/v) molasses] was found to contain (65.9%), neutral sugars and (34.1%) glucuronic acid.

Key words: *Bacillus*, different carbon sources, exopolysaccharide (EPS), sugar beet molasses
