on the specific activity of the recombinant protein are not known beforehand, we focused on the study of cultivation temperature and its effects on RhuA productivity.

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doi:10.1016/j.jbiotec.2007.07.887

58.
Exopolysaccharide production by *Halomonas* strains isolated from Turkey

Hande Kazak[1,*], Bahar Gürleyendag[2], Annarita Poli[3], Ebru Toksoy Öner[1], Barbara Nicolaus[3]

[1] *Department of Chemical Engineering, Marmara University Goztepe 34722, Istanbul, Turkey*
[2] *Department of Chemistry, Marmara University Goztepe 34722, Istanbul, Turkey*
[3] *Istituto di Chimica Biomolecolare (ICB), CNR Comprensorio Olivetti, 80078 Pozzuoli (Na) Italy*

In the recent years there has been a great interest to biotechnologists in the isolation and identification of extracellular polymeric substances (EPSs) because of their wide range of applications in the pharmaceutical, food, cosmetics and petroleum industries as viscosifying, gelling, and emulsifying agents (José Martinez-Cánovas et al., 2004; Iyer et al., 2006). There exists relatively little information concerning polysaccharide production by extremophiles and until recently, it was not clear whether these organisms were likely to be useful sources of polymers. However, promising results accumulated from preliminary studies have made increasing number of research groups focus on the EPS production from extremophiles (José Martinez-Cánovas et al., 2004; Iyer et al., 2006; Poli et al., 2006). The main objective of this work was the isolation and identification of stable, functional, EPS-producing extremophilic microorganisms, characterization of the biopolymer and establishment of fermentation protocols for the production of functional exopolysaccharides from extremophiles. For this purpose, a total of 10 halophilic microorganisms belonging to the genus *Halomonas* isolated from Çamaltı Saltern Area in Turkey were tested for their ability to produce exopolysaccharides. The EPS of the best producer strain was further analyzed in terms of its rheological and chemical properties. Sugar analysis was performed by analyzing the acid hydrolyzed EPS samples using TLC and HPAE-PAD. Ultraviolet spectra of EPS was obtained by reading the absorbance of aqueous solutions from 350 to 210 nm and the optical rotation value was obtained on a Perkin-Elmer 243 B polarimeter at 25 °C. NMR spectra were analyzed on a Bruker AMX-500. Methylation analysis of the polysaccharides was carried out by GLC and GC–MS using standards. The effect of carbon source was determined by following time dependent biomass and EPS production profiles of cells growing in chemical media containing glucose, lactose, sucrose, fructose, galactose, maltose, xylose, raffinose, arabinose, mannose, rhamnose, acetate, glycerol and trisodium citrate.

Acknowledgements: This research was financially supported by Consiglio Nazionale delle Ricerche (CNR) and The Scientific and Technical Research Council of Turkey (TUBITAK) through Joint Research Project No. TBAG-U/122 (104T263). Isolation of the microorganisms used in this study was financially supported by TUBITAK through Research Project No. TBAG 2321-103T069 under the kind supervision of Prof. D. Kazan.

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doi:10.1016/j.jbiotec.2007.07.888

59.
Effect of temperature on the utilisation of main carbon sources during aerobic batch biodegradation of distillery wastewater (potato stillage)

Malgorzata Krzywonos*, Edmund Cibis, Tadeusz Miskiewicz, Agnieszka Ryznar-Luty

Wroclaw University of Economics, Department of Bioprocess Engineering, Wroclaw, Poland

The main aim of the study was to assess the effect of temperature on the utilisation of main carbon sources during aerobic batch biodegradation of distillery wastewater (potato stillage) with a mixed culture of bacteria of the genus Bacillus. The experiments were performed at 20, 30, 35, 40, 45, 50, 55, 60 and 63 °C, at pH 7, in a 5 l working volume stirred tank reactor (Biostat®B, B. Braun Biotech International). The duration of the process was 125 h. The initial COD of the stillage amounted to 51.9 g O_2/l, the main carbon sources being reducing substances determined after hydrolysis (18.7 g/l), organic acids (12.2 g/l) and glycerol (3 g/l). The content of reducing substances determined before hydrolysis amounted to 12.85 g/l. The dominant organic acid was lactic acid which (with a content of 8.8 g/l) accounted for