PRELIMINARY ANALYSIS OF THE SUGAR CONSTITUENTS OF THE CAPSULAR POLYSACCHARIDE FROM ESCHERICHIA COLI SEROTYPE K45

G.G.S. Dutton*, D.N. Karunaratne**, N.S. Kumar***,
P.A.J. Perera** and U.A.K. Wickremasinghe**
*Dept. of Chemistry, University of British Columbia, Canada.
**Dept. of Biochemistry, Faculty of Medicine, Peradeniya.
***Dept. of Chemistry, University of Peradeniya.

A maximum polysaccharide yielding medium composed of 2.5% w/v total lactose in Mac Conkey agar (1), was used to grow *E.coli* serotype K45. The polysaccharide was isolated using cetavlon followed by repeated alcohol precipitations and final purification by dialysis. The purified polysaccharide was hydrolysed using hydrochloric acid. The hydrolycate was analysed by paper chromatography. Galactose, glucosamine and a fast moving amino sugar were detected. These components were converted to their volatile derivatives and analysed using capillary gas liquid chromatography. The presence of galactose, glucosamine and a 3.6 dideoxyaminohexose was confirmed by gas liquid chromatography - mass spectral analysis.

The capsular polysaccharide from *E.coli* K45, is thus composed of a repeating unit consisting of these three sugar units.

This work is supported by a Grant from NARESA.

Reference

Karunaratne, D.N., Perera, P.A.J. and Wickremasinghe, U.A.K. (1987), Proc. Sri Lanka Assn. Advmt. Sc 43.