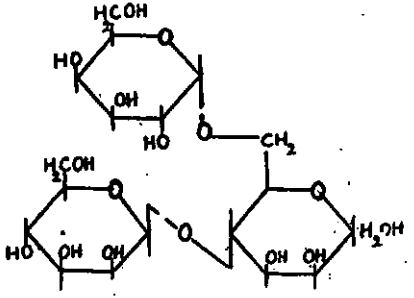
E-40

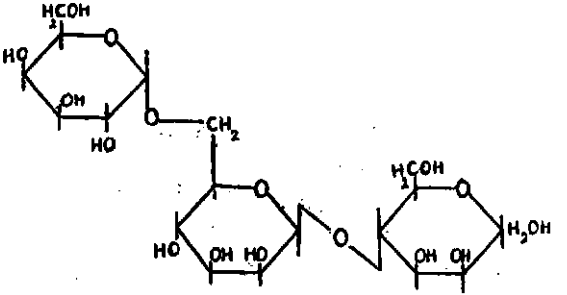
METHYLATION ANALYSIS OF A TRISACCHARIDE IN *LEUCAENA LEUCOCEPHALA* BY HPLC

V. D. P. Sirimanne
(Dept. of Chemistry, University of Sri Jayewardenepura, Nugegoda)
and **M. W. H. Cheetham**
(School of Chemistry, University of New South Wales, Australia)

The oligosaccharide isolated from the enzymic Driselase—β—D mannase hydrolysis of the galactomannan from *Leucaena leucocephala* contained mannose and galactose in the ratio 2 : 1. Previous studies have shown that the structure is likely to be either A or B.



A



B

The hydrolysis of this methylated trisaccharide (A and B) will result in different hydrolytic products (one partially methylated galactose and two partially methylated nannose derivatives) depending on the structure.

A full methylation was done by Brimacombe method[1] using dimethyl formamide and sodium hydride. Hydrolysis of the methylated product was affected using 10% HCl at 95°C for one hour. After neutralization and deionization (zeriolide D M—F) the hydrolysate was analysed by high performance liquid chromatography, using a mixture of methanol and water (9 : 1) as the solvent.

SECTION E

The hplc analysis resulted in the identification of 2,3,6 tri-O-methyl—D mannose, 2,3,4 tri—O—methyl—D—mannose and 2,3,4,6 tetra—O—methyl D—galactose, thus confirming structure B.

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References

1. Brimacombe, J. S. *et al.* (1966), *Carbohydr. Res.*, **2**, 167.
2. McCleary, V. *et al.* (1981). *Carbohydr. Res.*, **92**, 269.