

**ELECTROSPRAY MASS SPECTROMETRY OF β -GALACTOSYLGALACTOSES
PRODUCED BY ENZYMIC POLYMERIZATION**

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Previous work involving mass spectrometry of saccharides has been limited by the availability of suitable systematic series of oligosaccharide samples. In this study, a reverse enzyme reaction has been used to synthesize a series of β -galactosylgalactose disaccharides which were subsequently separated by high performance anion exchange chromatography.

Electrospray collisional activation mass spectra for the deprotonated quasi-molecular ions of the disaccharides were found to have significantly different fragmentation patterns, which were used to assign linkage positions for the various isomers. These sugars are proposed to be the (1 \rightarrow 1)-, (1 \rightarrow 2)-, (1 \rightarrow 3)-, (1 \rightarrow 4)- and (1 \rightarrow 6)- β -linked galactosylgalactoses.