



## XYLOGLUCAN OLIGOSACCHARIDES

05/2002

### PREPARATION:

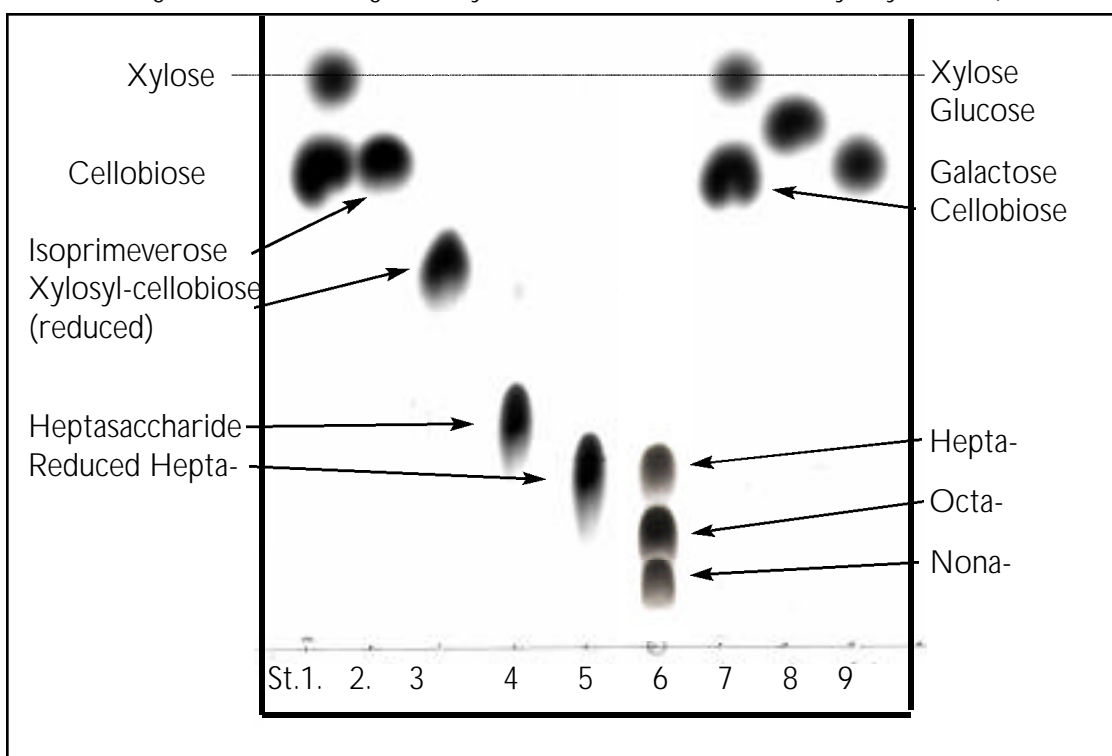
Xyloglucan oligosaccharides are produced by hydrolysis of tamarind seed xyloglucan with *endo*-cellulase followed by  $\alpha$ -galactosidase. Further hydrolysis to isoprimeverose is achieved with an isoprimeverose producing oligoxyloglucan hydrolase (IP-P-OXG hydrolase). The oligosaccharides are separated by size-exclusion chromatography.

### THIN LAYER CHROMATOGRAPHY OF XYLOGLUCAN-OLIGOSACCHARIDES:

**Solvent:** 1-Propanol-nitromethane-water = 7:1:2 (run once).  
**Sample:** 10  $\mu$ litres of a 10 mg/ml solution.  
**Spot Development:** 5% sulphuric acid in ethanol spray, followed by incubation at 110°C for about 5 min.

### OLIGOSACCHARIDES:

- 1 & 7. Xylose + Cellobiose;      8. Glucose;      9. Galactose  
 2. Isoprimeverose (Lot 20502)  
 3. Borohydride reduced xylosyl-cellobiose (a potential substrate for  $\alpha$ -xylosidase)(Lot 20503)  
 4. Heptasaccharide containing 3 xylosyl and 4 glucosyl residues (Lot 20507)  
 5. Borohydride reduced heptasaccharide containing 3 xylosyl and 4 glucosyl residues (Lot 20508)  
 (A substrate for measurement of IP-P-OXG-hydrolase by reducing sugar procedures).  
 6. Mixture of heptasaccharide (4 above) plus octasaccharide and nonasaccharide (heptasaccharide containing one or two D-galactosyl residues linked  $\alpha$ -1,2 to xylosyl units (Lot 20509)

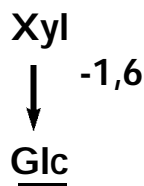
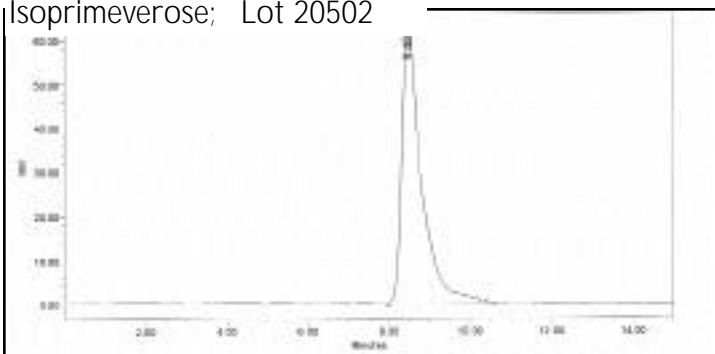


HPLC chromatography of xylosyl-glucose oligosaccharides on a Waters SugarPac I column

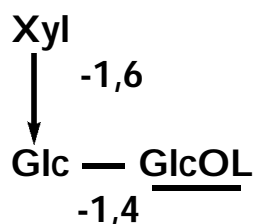
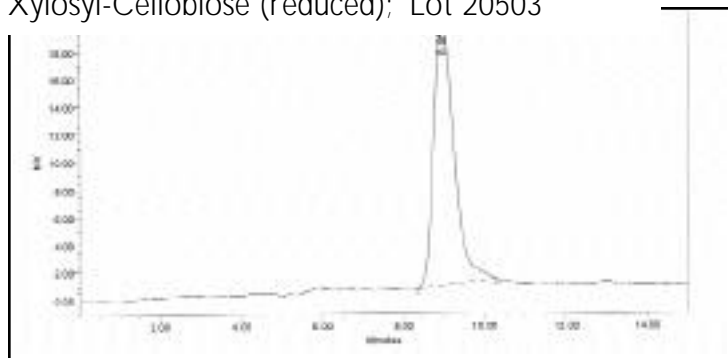
Sample: 50 µlitres of 10 mg/ml.

Solvent: 0.1 mM calcium EDTA in deionised, degassed bacteria-free water.

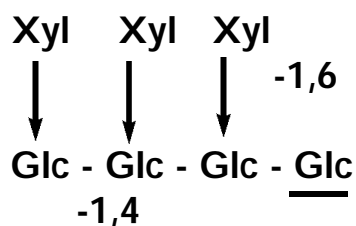
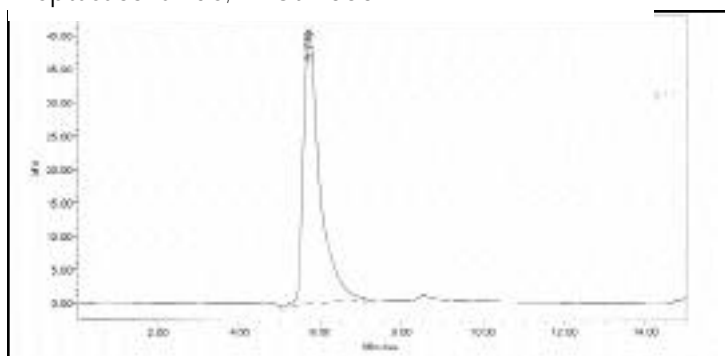
Isoprimeverose; Lot 20502



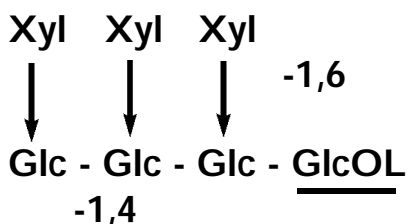
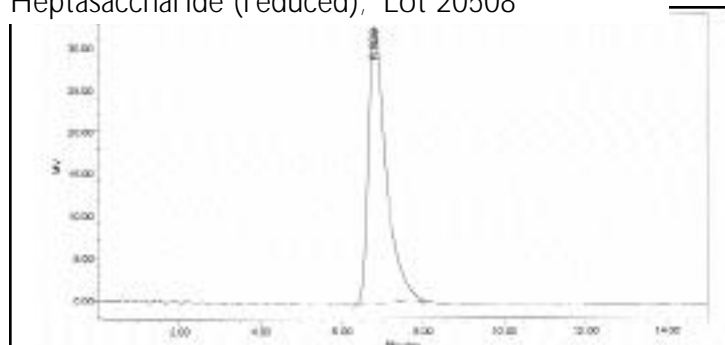
Xylosyl-Cellobiose (reduced); Lot 20503



Heptasaccharide; Lot 20507



Heptasaccharide (reduced); Lot 20508



Hepta-, +Octa- + Nonasaccharide; Lot 20509

