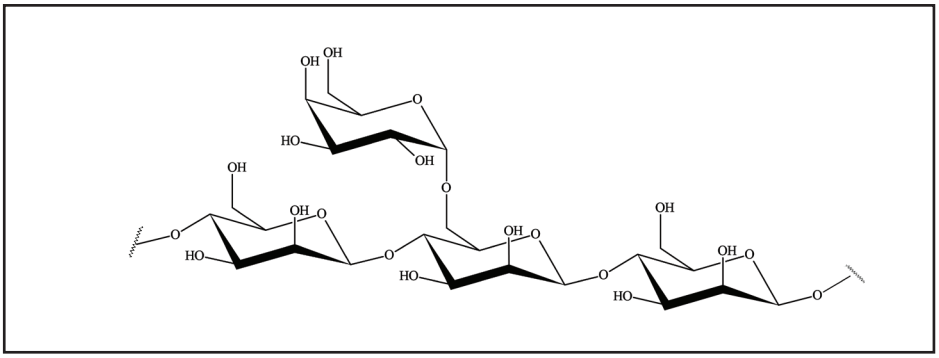
CAROB GALACTOMANNAN (Low Viscosity) (Lot 150901a)

P-GALML **09/18**
CAS: 11078-30-1

STRUCTURE



Schematic representation of carob galactomannan unit

PROPERTIES

Purity:	> 94% (dw basis)
Sugar Ratio:	Galactose : Mannose = 24 / 76
Viscosity:	13 cSt (1% w/v; Ostwald C-type viscometer, 30°C)
Ash	0.6%
Protein:	1.6%
Moisture:	~ 3.0%
Physical Description:	White, odourless powder

STORAGE CONDITIONS

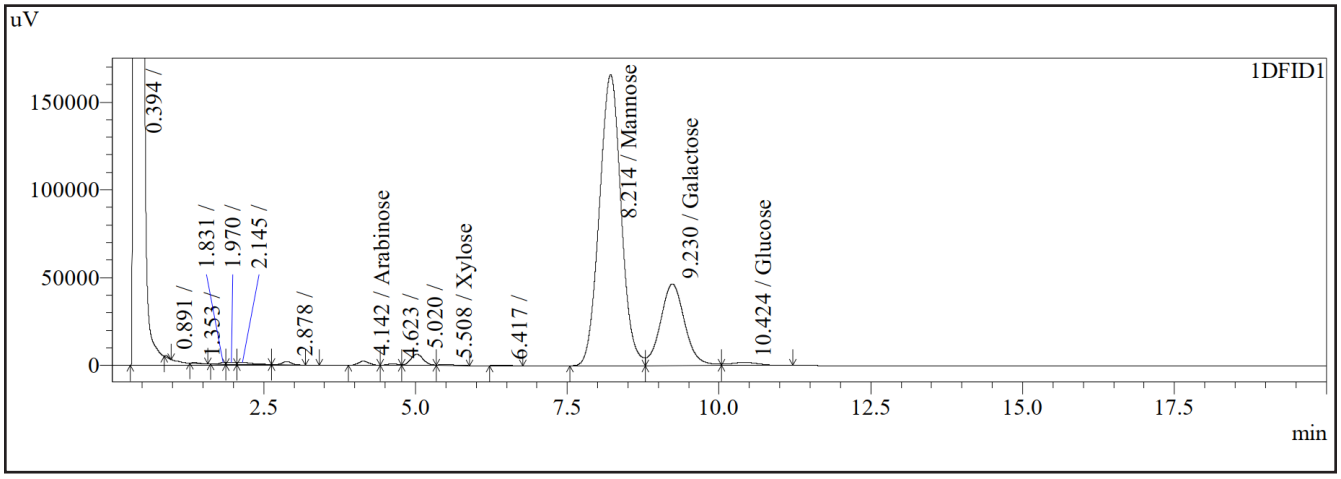
Store dry at room temperature in a well sealed container. Under these conditions, the product is stable for several years.

METHOD OF DISSOLUTION

Accurately weigh 1 g of carob galactomannan into a 120 mL dry pyrex beaker. Wet the sample with 2 mL of 95% ethanol. Add a magnetic stirrer bar followed by 90 mL of distilled water. Stir the slurry gently on a magnetic stirrer and store at 4°C overnight to allow the polymer to fully hydrate. Place the beaker on a magnetic stirrer-hotplate and heat at a setting of 120°C while vigorously stirring the contents. Loosely cover the beaker with aluminium foil, and when the solution begins to boil, turn the heat off but continue stirring until the galactomannan is completely dissolved (about 20 min). Adjust the volume of the solution to 100 mL. The solution may be slightly turbid. This turbidity (due to trace amounts of denatured protein) can be removed by centrifuging the solution at 12,000 g for 10 min.

Solutions of carob galactomannan can be stored at room temperature for several weeks in a well sealed storage bottle. Microbial contamination is prevented by adding a few drops of toluene to the storage bottle.

Gas liquid chromatography of the alditol acetates derived from hydrolysis and derivatisation of low viscosity carob galactomannan (Lot 150901a)



GLC

A typical polysaccharide sample (~ 10 mg) was hydrolysed using 2N TFA at 120°C for 60 min. Subsequent sodium borohydride reduction was performed in 1N NH_4OH for 90 minutes at 40°C. The corresponding alditol acetates were prepared using acetic anhydride and 1-methyl imidazole, extracted into DCM and analysed by GC. Chromatography was performed on a Shimadzu GC-14B with CHROMATOPACK C-R8A using a Packed glass column (6 ft x 5 mm OD, 3 mm ID) with 3% Silar 10C on W-HP (80-100 mesh). The carrier gas was nitrogen at 130 KPa. Injector temperature; 250°C; Column temperature 230°C. Detection by FID with 60KPa H_2 pressure and 50 KPa air pressure.