

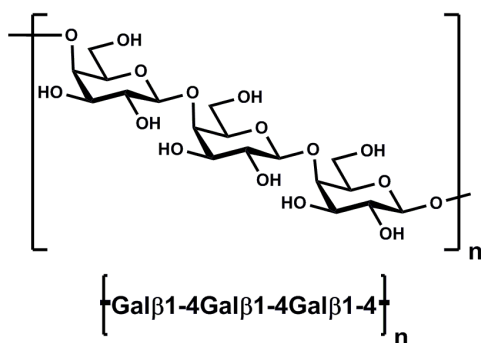
GALACTAN (LUPIN) (Lot 160309a)

P-GALLU

05/16

CAS: 9037-55-2

STRUCTURE



Schematic representation of galactan (lupin)

PREPARATION:

Galactan (lupin) is prepared by treatment of the pectic galactan from lupin with α -L-arabinofuranosidase to remove the bulk of the arabinose residues. Typically, the arabinose content is reduced from 15-17% to 3-5% and the galactose content is increased from 74 to 83-87%.

PROPERTIES

Sugar Composition:

Neutral sugars ratio: Galactose 82.0%, arabinose 5.8%, rhamnose 5.1%, xylose 1.4%, other sugars 5.7%

Galacturonic acid: 14.6 %

Molecular weight: 1182 kDa

Protein: 3.2%

Ash: 3.7%

Physical Description: Off-white, odourless powder

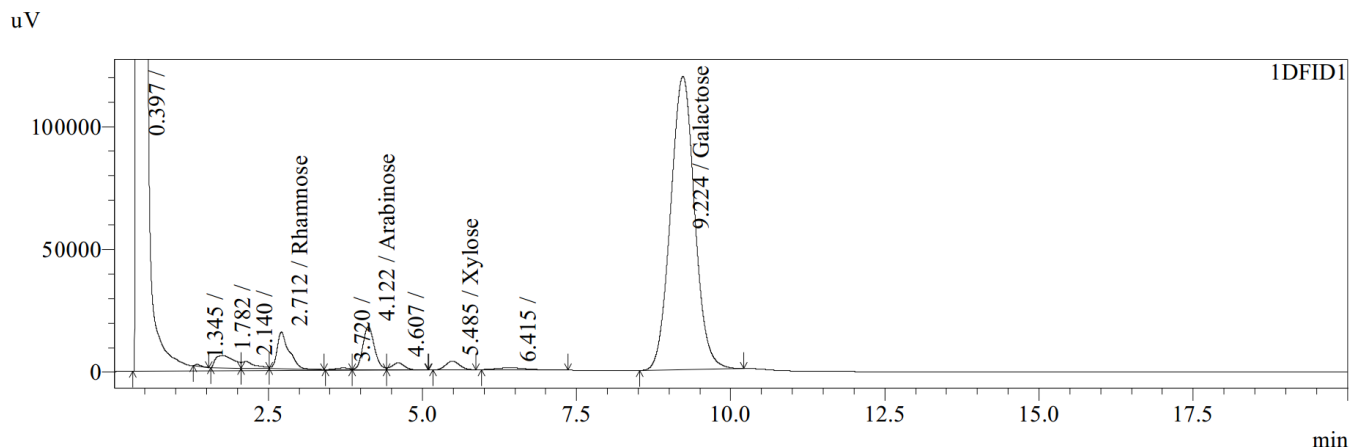
STORAGE CONDITIONS

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

DISSOLUTION:

Galactan (1 g) is added to 95 ml of vigorously stirring distilled water at about 60°C, and stirring is continued until the galactan completely dissolves (about 10 min). The solution is cooled to room temperature, and the volume is adjusted to 100 ml. This solution is stored in a well-sealed glass container. Microbial contamination is prevented by the addition of a few drops of toluene to the container. Store at 4°C.

Gas liquid chromatography of the alditol acetates derived from hydrolysis and derivatisation of Galactan (Lupin) lot 160309a.



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 NH₄OH 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-2014 with LabSolutions LC/GC 5.42 Software 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 225 KPa. Injector temperature; 250°C; Column temperature; 230°C. Detection by FID with 100 KPa H₂ pressure and 50 KPa air pressure.