Megazyme Building 1,
Bray Business Park,
Bray, Co. Wicklow,
A98 YV29,
Ireland.
Tel: + 353 1 2861220 Fax: + 353 1 2861264

Certificate of Analysis

Product: Mannan (Ivory Nut)
Cat. No: P-MANIV
Lot. No: 160524
Expiry Date: N/A

Parameter	Specification	Results
Purity	> 98% (dw basis)	98 %
Protein	< 1%	0.1 % (Nitrogen x 5.7)
Moisture	< 5%	1 %
Ash	< 2%	0.25 %

Solubility:
Insoluble in water.
Can be dissolved at 20 mg/mL in 10% sodium hydroxide and on neutralisation with 50% acetic acid, the mannan will remain in solution for several hours.

Sugar Composition:

Mannose	98%
Arabinose	Trace
Xylose	Trace
Glucose	Undetectable
Galactose	Undetectable

This lot meets our specification.

Signature: Ciara McLoughlin **Date:** 01.Mar.2022

Ciara McLoughlin
QC Specialist
(*as this certificate is a computer printout, it has not been signed or dated by hand*)

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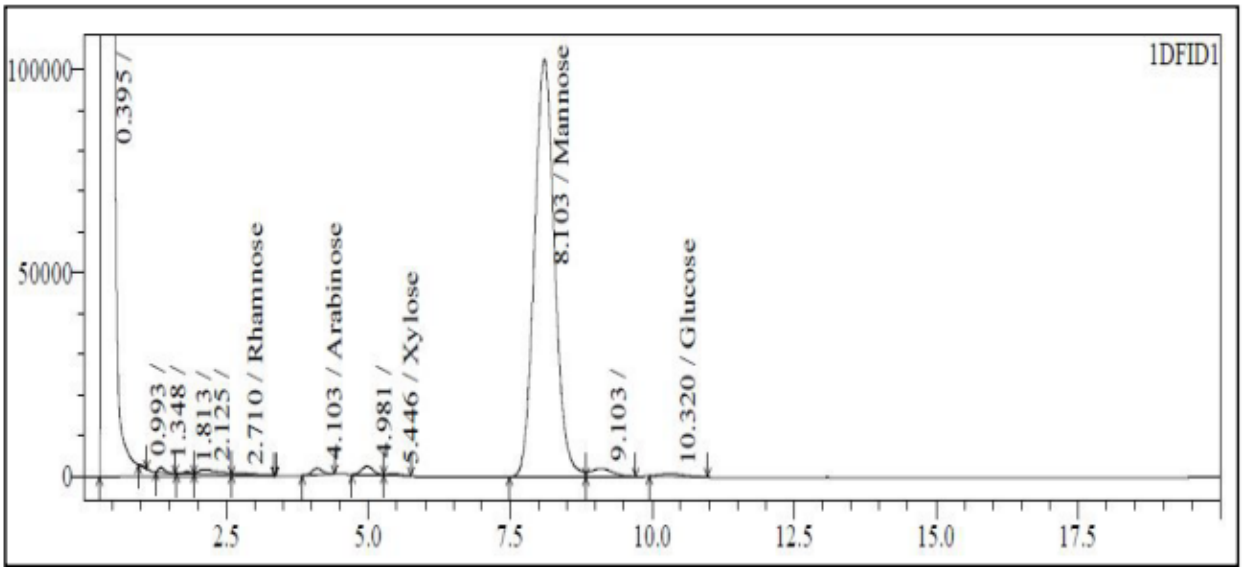
GC:

Gas liquid chromatography of the alditol acetates derived from hydrolysis and derivatization of Mannan (Ivory Nut) (Lot 160524)



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-14B with CHROMATOPACK C-R8A using a Packed glass column (6ft x 5 mm OD, 3mm 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 H2 pressure and 50 KPa air pressure.

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