



DEBRANCHED ARABINAN (SUGAR BEET) (Lot 100401c)

P-DBAR

05/16

CAS: 9060-75-7

PREPARATION:

Debranched arabinan is prepared by treatment of sugar-beet arabinan with α -L-arabinofuranosidase to remove all 1,2- and 1,3- α -L-arabinofuranosyl branch units. Complete debranching is confirmed by proton resonance NMR.

Sugar and uronic acid composition of debranched arabinan lot 100401c is:

Arabinose : Galactose : Rhamnose = 71 : 26 : 3

DISSOLUTION:

Debranched arabinan is sparingly soluble in cold water, but readily dissolves in water at 70°C. Concentrations of up to 20 % w/v can be achieved.

PROPERTIES:

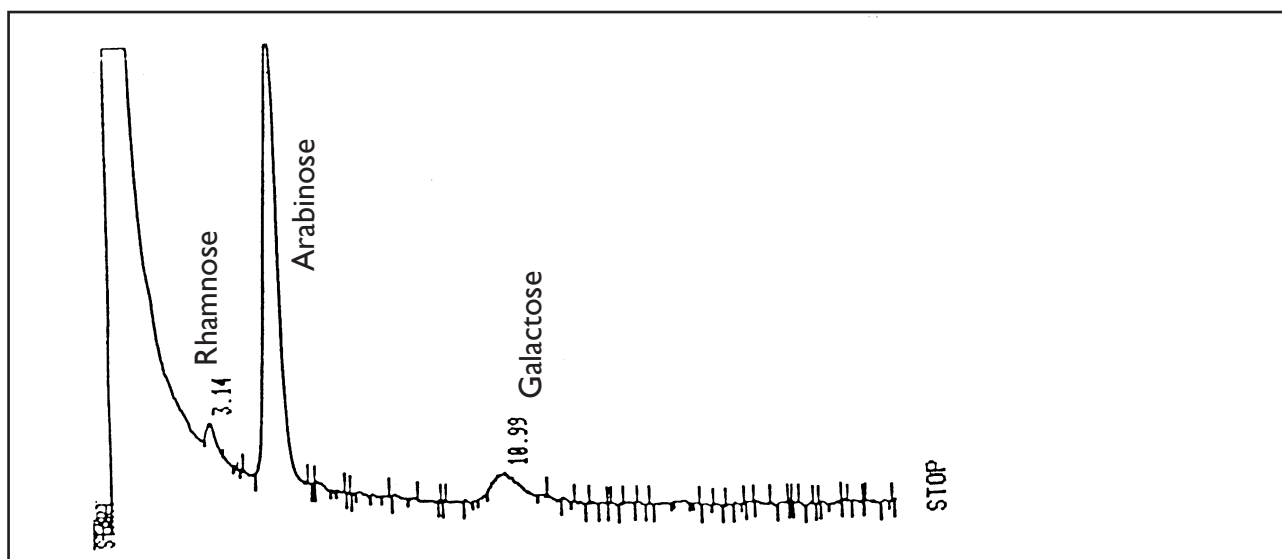
Protein content: 1.1 % (Nitrogen x 5.7).

Physical description: Odourless, off-white powder.

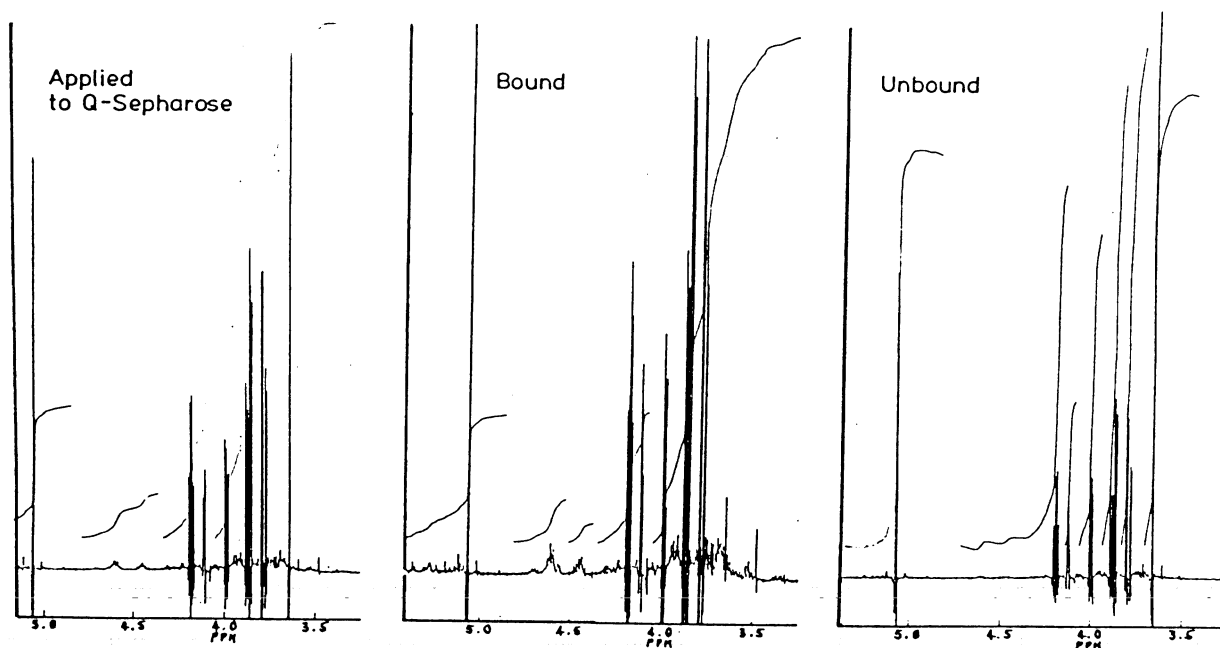
Molecular weight: Approximately 18,000 Daltons.

Soluble in hot water, but will precipitate on storage at 4°C.

Typical Glc trace of alditol acetates:



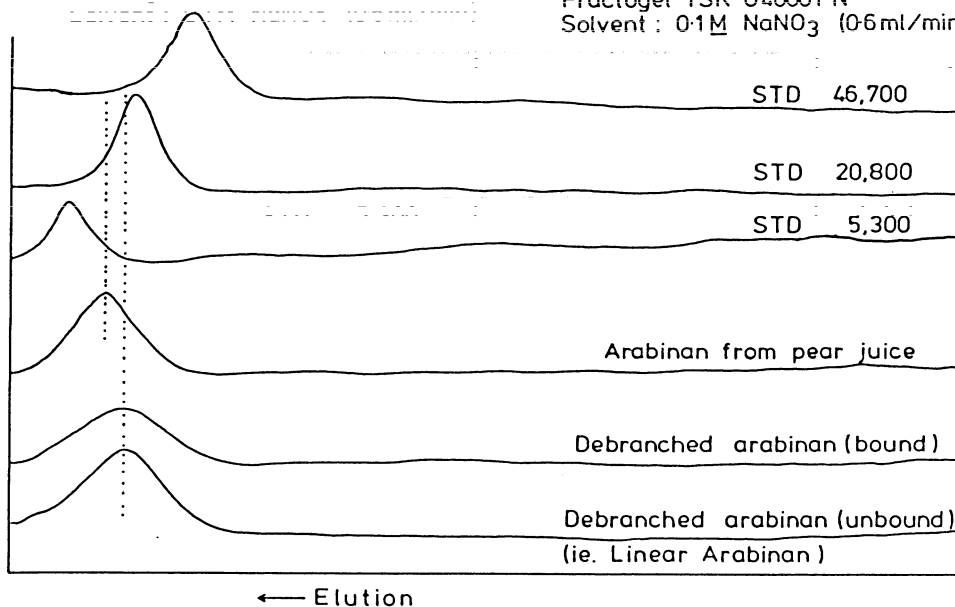
PROTON RESONANCE NMR OF DEBRANCHED ARABINAN.



The Unbound fraction on Q-Sepharose is termed Linear Arabinan. This proton resonance pattern is the essentially the same as that for pear-juice linear arabinan.

HPLC OF ARABINAN FRACTIONS

Fractogel TSK G4000PN
Solvent: 0.1M NaNO₃ (0.6ml/min)



Samples were bound or unbound on chromatography on Q-Sepharose Fast Flow.