



INSOLUBLE WHEAT ARABINOXYLAN (Lot I20801b)

P-WAXYI

10/15

CAS NO. 9040-27-1

PROPERTIES:

Sugar composition: Arabinose, 36%; Xylose, 51% ; Glucose, 6.5 %, Mannose, 4.4% and Galactose, 1.6%
(glc of alditol acetates, following H₂SO₄ hydrolysis).

Purity: ~ 80%

Starch content: < 0.1%

Beta-glucan: < 0.1%

Glucose (possibly as cellulose): 6.5%

Protein: 2.7%

Moisture: 2.9%

Ash: 0.2%

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.

METHOD OF DISSOLUTION (for 1.0% w/v solution):

This arabinoxylan is the insoluble “pentosan” fraction from wheat flour. It has been purified to remove starch, β-glucan and protein. The product contains cellulose (measured as glucose by g.l.c. and possibly glucomannan and arabinogalactan. The material is insoluble in water, but can be solubilised as follows:

Add 1 gram of insoluble arabinoxylan to 90 mL of distilled water at room temperature and stir vigorously on a magnetic stirrer for 5 min to remove all lumps. Add 10 mL of 1 M sodium hydroxide solution and stir for 10 min at room temperature. Neutralise the solution by the addition of 5 M acetic acid, and adjust the pH to 4.5 with 1M HCl or 1 M sodium hydroxide. Adjust the volume to 100 mL with distilled water.

The solution is a light yellow/orange colour, and may be very slightly opalescent due to the presence of protein.

Arabinoxylan solutions can be stored at room temperature for several weeks in a well sealed storage bottle. Microbial contamination is prevented by adding two drops of toluene to the storage bottle.

GLC of the alditol acetates of insoluble wheat arabinoxylan (Lot 120801b) hydrolysed with sulphuric acid.

