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The pectins are a mixture of polymers highly branched acids and neutral. Constitute 30% of dry weight of the primary cell wall of plant cells . In the presence of water form gels . Determine the porosity of the wall, and thus the degree of availability of the substrates of the enzymes involved in the modifications thereof. Pectins also provide charged surfaces that regulate the pH and ionic balance . Pectins have three main domains : homogalacturonanos, ramnogalacturonan I and II ramnogalacturonan.

Consisting of residues of D-galacturonic acid (Galu) connected by a link a (1 ? 4) . The carboxyl group of the C6 (carbon number of Galu 6) may be methyl-esterified or remain free. Free carboxyl groups, if they are dissociated, giving rise to calcium links between neighboring chains HG, forming the so-called egg-crate structure. So that a region of HG is sensitive to calcium binding molecules are required ten Galu unesterified, the formation of bonds of this type is relacinada with the arrest of the extent of cell wall and, therefore, with cessation of growth and increased rigidity of the wall. The Galu can be acetylated at the O2 (oxygen Galu No. 2) or O3.

Galu linked in a (1-4) with traces of L-rhamnose (Rha) interspersed with a link a (1-2) , that is: [(1-2)-a-L-Rha-(1-4) -a-D-Galu] n, where n may be greater than 100. These residues are Rha anchoring side chains, about half are connected by chains C4 arabinans , consisting of a-L- arabinose (Ara) bound in a (1-5) as its main axis which may be substituted Ara chains (1-2)-a-Ara (1-3) and / or Ara (1-3)-a-Ara (1-3), or Arabinogalactan I (AGI), chains of ÃŸ-(1 - 4) -D-galactose (Gal), C6-Gal branching. Can also be replaced and a (1-5) in the C3 Ara Gal.

Small polysaccharide very complex structure, formed by Galu, Rha, Ara, Gal and small quantities of rare sugars such as apiose , or pincushion acid . The Rha residues may be substituted at C3 and C3-C4, C2, C3, and C4 or be terminal. The arabinogalactan of RGII has ramifications in C3 and C6 of Gal and C3 and C5 of Ara. The side chains contain a high number of different wastes together with various links, yet the RGII is highly conserved structure and can form dimers through a borate bridge with two ester bonds .

Arabinans and galactans RGII of family Amaranthaceae may be associated with ferulic acid by an ester linkage, making it possible to link several chains by bridges diferuil by the action of peroxidases . Also cause dimerization links hydroxycinnamic acid bound arabinans and galactans the RGI due to the action of peroxidases.

Pectin has been used as intestinal absorbent for many years. Furthermore, it was attributed some beneficial effects in preventing cancer , especially colorectal . Recently a team of researchers found in laboratory studies that certain components of pectin bind and possibly inhibit a protein that facilitate the spread of cancer in the body. Apparently, some sugars in pectin bind to galectin-3 , a protein on the surface of tumor cells that promotes cell growth and spread in the body. 1

This binding, in turn, allow the pectin inhibits galectin-3 and, thus, delay or even reverse the spread of tumor cells.

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