

A COMPARATIVE STUDY OF FRUTALIN-GALACTOMANNANS BINDING BY AFFINITY CHROMATOGRAPHY.

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Frutalin isolated from seeds of *Artocarpus incisa* can be classified in the general group of D-galactose-binding lectins. In this study, we compared the interaction of galactomannans from different plant sources with frutalin. Galactomannans are polysaccharides which consist of a 1,4-D-mannose backbone and 1,6-D-galactose side chains. The mannose:galactose ratio (M:G) varies from species to species. In this work were used galactomannans with M:G ration of 3.1:1 (*Parkinsonia aculeata*), 3.0:1 (*Cassia fastuosa*, *C. leptophylla*, *Ceratonia siliqua*, *Schizolobium amazonicum*, *S. parahybum*), 2.8:1 (*Caesalpinia pulcherrima*), 2.7:1 (*Dimorphandra moliis*), 2.3:1 (*Senna multijuga*), 2.0:1 (*Delonix regia*), 1.8:1 (*Adenantha pavonina*), 1.6:1 (*Cyamopsis tetragonolobus*), 1.5:1 (*Stryphnondendron barbatiman*) and 1.1:1 (*Mimosa scabrella*). These polysaccharides were cross-linked by reaction with epichlorohydrin in presence of NaOH in order to form gels. The gels obtained were used to isolate the lectin by affinity chromatography. The presence of lectin was confirmed by hemagglutination activity and SDS page. Although all the gels interact with lectin the best results were obtained with lowest M:G ratio (M:G 1.1:1). Thus the *M. scabrella* galactomannan showed the best affinity. *C. leptophylla* galactomannan (M:G 3.0:1) was the worst. The pattern of galactosyl distribution in galactomannans from different species, with the same M:G ratio generally shows variation.

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