**Opportunities of natural polymers in the biocomposites based from Agro-Resources: Grewiavenusta mucilage and Bombaxcostatum calyx, two tropical plants like sources of natural binders for particleboards manufacturing**

<http://documents.irevues.inist.fr/bitstream/handle/2042/57024/68330.pdf?sequence=1>

**Abstract:**

Until about 1920, world was essentially based on use of materials for agro-based resources. With the coming of high performance metals, ceramics, plastics and other synthetics, the use of agro-based derived materials has lost its market share. Now, we are aware that our landfills are filling up, our resources are depleted and our planet becoming polluted. Today, it is not more to prove detrimental interest of synthetic materials (plastics or formaldehydes adhesives) on the environment and human health. Because of this, there is renewed interest of technologies which respect environment for the production of materials and products recyclable and biodegradable. In this article we present results of a prospecting study and qualitative evaluation of properties of natural binders in Grewiavenusta stem bark and Bombaxcostatum calyx flower sepal. These two mucilaginous plants were studied as potential bio adhesive sources in the development of formaldehyde-free particleboard. Mucilage and pectin fractions of both plant organs were analysed for monosaccharides identification and quantification. The binding properties of these mucilages were investigated by testing mechanically particleboard made with the extracted mucilages. The aqueous extraction and ethanolic precipitation, followed by ionic chromatography gave of some qualitative results interesting. The mechanical tests of the panels realised following the standard requirements ANSI 208.1, have given interesting results.