



Abstract book

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Purification and structural characterization of a (4-*O*-methyl)-glucuronoxylan from gabiroba fruit (*campomanesia xanthocarpa berg*)

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Gabiroba (*Campomanesia xanthocarpa* Berg) is a Brazilian native fruit from Myrtaceae family. In this study hemicelluloses from the pulp of gabiroba were investigated. The pulp of gabiroba was subjected to sequential extraction with hot water, citric acid and alkaline solution. The later gave rise to a polysaccharide fraction named GA2M (3.6 g%), which was submitted to fractionation procedures of freeze-thaw followed by Fehling treatment. The Fehling precipitated fraction (GE-FP) was subjected to membrane ultrafiltration using a 300 kDa MWCO. The eluted fraction (GE-300) showed a homogeneous elution profile by high-pressure steric exclusion chromatography coupled to multi-angle laser light scattering (HPSEC-MALLS). The neutral monosaccharide composition was analyzed by gas chromatography coupled to mass spectrometry (GC-MS) and the acid monosaccharides determined by colorimetric method and identified by high-performance anion-exchange chromatography with pulsed amperometric detection HPAEC-PAD). The fraction GE-300 showed to be mainly composed by xylose (39%). ¹³C nuclear magnetic resonance (NMR) showed five main signals at δ 101.6 (C1), 72.7 (C2), 73.7 (C3), 76.4 (C4) and 63.0 (C5), that could be assigned to a (1 \rightarrow 4)-linked β -D-xylan. Signals at δ 174.9 and 59.5 were assigned to -COOH of GlcA and -OCH₃ of 4-*O*-Me-GlcA, respectively. The presence of 4-*O*-Me-GlcA units was confirmed by ¹H-¹³C heterocorrelated HSQC NMR due the presence of the signal δ 5.28/97.65 ppm in the anomeric region. The chemical and spectroscopic analysis suggest the presence of a 4-*O*-methyl-glucuronoxylan in the pulp of gabiroba fruit, which was not previously described for fruits belonging to the Myrtaceae family.

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