

INFLUENCE OF EXTRACTION CONDITIONS ON XYLOGLUCAN PROPERTIES

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Xyloglucan is a major hemicellulosic polysaccharide in the primary cell walls of dicotyledons and some monocotyledons, also display storage functions in some leguminous seeds such as *Copaifera langsdorffii* (copaíba) and *Hymenaea courbaril* (jatobá). Xyloglucans from seeds of above copaíba (XGC) and jatobá (XGJ) were obtained from milled defatted cotyledons by aqueous extraction at 25°C for 0.25, 0.5, 1, 5, 15, 24 and 48 h. The resulting fractions contained Glc, Xyl and Gal in close agreement with the molar ratios normally found for these polysaccharides. Although HPSEC-MALLS/RI analysis showed that all the fractions were homogeneous, the arabinose content, which is believed to be a contaminant was greater in xyloglucans obtained after 24 and 48 h. The contents of total sugar for fractions obtained after 0.25, 5 and 48 h for XGC were 94%, 87%, 67% and for XGJ were 92%, 81% and 79%. On the other hand, for longer extractions, the protein content was greater. Analysis using a dynamic light scattering detector, for XGJ showed that samples obtained after longer times had a higher hydrodynamic radius (R_h). Values at 46.45 and 53.75 nm were determined for the polysaccharides obtained after 0.25 and 48 h extraction. The present data suggest that extractions of xyloglucans from seeds for longer times could cause aggregation of the polysaccharide. Supported by CAPES, CNPq, Fundação Araucária and PRONEX.