

Title Extraction and structural identification of alkali-soluble polysaccharides of longan (*Dimocarpus longan* Lour.) fruit pericarp

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Abstract

Two alkali-soluble polysaccharide fractions (ASPs I and II) were extracted from longan fruit pericarp in this work. The results of chemical composition indicated that ASP I and II fractions comprised mainly of polysaccharides, proteins and lignins. Four monosaccharides, namely Xyl, Ara, Glc and Gal, were identified for both ASPs I and II. Xyl was the dominant monosaccharide in the two alkali-soluble polysaccharides with relative molar percentages of >60%. It constructed the backbone in combination with Ara for both ASPs I and II. The analysis of glycosidic linkage indicated that Xyl had two linkages, $\rightarrow 3$ -Xyl-(1 \rightarrow and $\rightarrow 3, 4$)-Xyl-(1 \rightarrow). The substitution at C-4 position indicated that Xyl was of pyranose structure. The infrared spectra of ASPs I and II showed the characteristic bands at approximate 897 cm^{-1} which indicated the β -linkage configuration of Xyl.