

Title Comparison of the cell wall composition for flesh and skin from five different plums
Author Catherine M. G. C. Renard and C. Ginies
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Abstract

Cell walls were isolated from flesh and skin of five plum varieties corresponding to three species (*Prunus domestica* L., *Prunus salicina* Lindl. and *Prunus insititia* Lindl.) using the alcohol-insoluble solids (AIS) procedure. Yields varied from 83 to 114 g kg⁻¹ dry weight in the flesh and from 192 to 361 g kg⁻¹ dry weight in the skins. Their main sugars were uronic acid (224–322 mg g⁻¹ AIS), cellulosic glucose (139–170 mg g⁻¹ AIS), galactose and arabinose. Galactose and arabinose ratio were variable between the varieties. The degrees of methylation were high (62–84).

The cell walls of the flesh and skin of three of these plums: Golden Japan, Prune Rouge and Reine Claude (two *P. salicina* and one *P. domestica*) were extracted using water, chelator (CDTA), dilute alkali, concentrated alkali (4 M NaOH), followed by washing with water. The main fractions were water- and dilute alkali-soluble pectins, with 19–31% and 17–29% yields. The composition of the 4 M NaOH extract was diagnostic of a fucogalactoxyloglucan as the main hemicellulose, representing 3–7% of the plum AIS. Cellulose only accounted for 10–11% of the AIS from flesh and 7–9% of the AIS from skin.