



IDENTIFICATION AND CHARACTERIZATION OF MALTO-OLIGOSACCHARIDE FROM PINHÃO

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Track

Caracterização química e físico-química de alimentos (FQ)

Keywords

Pinhão, Maltooligosacarídeos, Brazilian pine seed. Brazilian pine seed known as pinhão is one of the most important native food in South Brazil. Despite its potential as a slow food, pinhão is also strategic to maintain the viability of the *Araucaria angustifolia* in our forests. Pine is dehiscent because they open to release the seeds. The seeds can be collected during different months. When harvested from March to April they are considered early; from May to June are middle; July to August late). Formed by α -D-glucose, the malto-oligosaccharide can undergo enzymatic actions of pullulanase, isoamylase among others, since they contain type bonds α (1 \rightarrow 4). The goal of this study was to identify and characterize the oligosaccharide of nine pinhão samples collected in the Germoplasm Bank of *Araucaria* at Embrapa Forestry. For each harvest time (early, middle and late) 3 samples of pinhão were evaluated. Data were analyzed in a randomized hierarchical design (harvesting period and origin of the progenie). The oligosaccharides were evaluated using Ion chromatography and an amperometric detector. The

elution was a linear grad with 2 solvents: 0,1 M NaOH and 0,5 M NaOAc and the peaks were compared with standards of oligosaccharides. Results were expressed in mg per 100 g Fresh weight. Higher concentrations of fructofuranosyl nystose (fructooligosaccharide) in the early and late pinhão presented 83.7 and 93.6 mg/100 g, respectively. However, the quantification of maltooligosaccharides (MOS) was more significant. Maltoheptaose had a higher concentration with 234, 210 and 177 mg/100 g FW (early, middle and late, respectively). Maltohexose, maltopentaose and maltotriose were also detected. It is important to point out that the lower MOS presented higher concentrations in the late pinhão, while the larger MOS had higher concentrations for the early pinhão. This work is important, since it is unpublished and research is limited on the composition of the pinhão.