



Universidade Federal do Paraná

Programa de Pós-Graduação em Ciências (Bioquímica)



Simpósio Comemorativo dos 50 anos do Programa de Pós-Graduação em Ciências (Bioquímica) da UFPR

Livro de Resumos

Curitiba-PR

2015



Programa de Pós-Graduação em Ciências (Bioquímica)

STEADY AND DYNAMIC SHEAR RHEOLOGICAL PROPERTIES OFGABIROBA PULP

(*CAMPOMANESIA XANTHOCARPA BERG*)

Barbieri, Shayla F.¹; Petkowicz, Carmen L. O.¹; Ruthes, Andrea C.²; De Godoy, Rossana C. B.³; Silveira, Joana L. M.¹

¹Biochemistry and Molecular Biology Department, Federal University of Paraná, CEP 81.531-980, Curitiba-PR, Brazil

²Division of Glycoscience, Royal Institute of Technology - KTH, Sweden

³Empresa Brasileira de Pesquisa Agropecuária - Embrapa Florestas, CEP 83.411-000, Colombo-PR, Brazil

Gabiroba (*Campomanesia xanthocarpa Berg*) is a Brazilian native fruit. Its pulp presented $82 \pm 0.8\%$ of moisture content, while different polysaccharides: pectin, hemicellulose and cellulose compose $17 \pm 0.8\%$ of dry weight. Monosaccharide composition of pectin fractions showed mainly arabinose (Ara 40-60%) and galacturonic acid (GalA 20-42%). The rheological properties of gabiroba pulp were evaluated by steady-state shear experiments where pulp exhibited a non-Newtonian pseudoplastic behavior and also showed a yield stress minimum to initiate the flow related to the material's internal structure which must be broken. The presence of a yield stress is a typical characteristic of multiphase materials as fruit pulps and juices, which are formed by a dispersion of insoluble components. In dynamic rheological analysis, the gabiroba pulp presents gel behavior (frequencies 0.01-100 Hz, at 25°C). Thermal stability as a gel behavior was observed for the gabiroba pulp at temperatures from 5-95°C, 1 Hz. This stability is suitable for use of the pulp in food formulations, such as the production of jelly.

Financial Support: Rede Nanoglicobiotecnologia MCT/CNPQ, Pronex Carboidratos, CNPq