

THERMAL ANALYSES OF SWEET POTATO (*Ipomoea batatas*) UNDER OXIDATIVE ATMOSPHERE.

Fernanda J. O. Gomes da Costa, Rafael R. Almeida, Egon Schnitzler, Ivo, M. Demiate, Marco A. S. C. Filho, Luiz G. Lacerda, Rossana C. B. Godoy, Nina Waszczyński. Universidade Federal do Paraná - R. Cel. Francisco H. dos Santos, 100. CEP 81531-990 – Curitiba – PR

Sweet Potato (*Ipomoea batatas*) is over 1000 species, but only a few have a commercial interest. Its origin was noticed in South and Central America, and its use is related since more than 10,000 years ago by ancient civilizations in those regions. This study was performed in order to characterize sweet potato thermal properties. Integral sweet potato sample was dried and grinded. TG (Thermogravimetry), DTA (Differential Thermal Analysis) and DSC (Differential Scanning Calorimetry) curves were recorded using a Shimadzu TG 60 and DSC 60, with synthetic air flowing at 100 mL/min., and a heating rate of 10°C/min. and with mass samples of about 6 mg. Alumina open sample holder and aluminum sealed crucibles were used for TG/DTA and DSC, respectively. TG curve showed a moisture loss of 12,74%, total mass loss of 94,78%, thermal stability was detected at 249,87°C (on-set). DTA curve showed first oxidative peak at 301,58°C and a second degradation peak at 446,54°C. DSC endothermic profile curve is related to melting event of starch presented in sample. It was observed a melting point event at 189,23°C. The thermal analysis provided data used for verifying the differences between the thermal profiles of each natural source, allowing new studies for sweet potatoes and opening doors for an alternative source for the industry.