CARPATHIAN JOURNAL OF FOOD SCIENCE AND TECHNOLOGY

journal home page:**http://chimie-biologie.ubm.ro/carpathian_journal/index.html**

DENSITY, STEADY AND DYNAMIC STATE SHEAR RHEOLOGICAL PROPERTIES OF GONGURA (HIBISCUS SABDARIFFA) LEAVE PUREE AS A FUNCTION OF TEMPERATURE & TSS

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https://doi.org/10.34302/2019.11.4.7

Article history:
Received:
17 February 2019
Accepted:
10 October 2019

Keywords:
Gongura Leaves;
Density;
Puree;
Rheology;
TSS.

ABSTRACT

Rheological properties must be assessed for the processing and handling of different pastes and purees. Cox Merz rule was applied and variation in dynamic and steady-state properties with temperature (283-358K) was evaluated for Gongura leaves puree. Mathematical models were applied in relation to experimentally obtain TSS and density and it was concluded that the linear correlation was best suited. With an increment in TSS and decrement in temperature, there is an increment in the density of the puree. HB model was found to be best fitted and described the flow behavior of the puree, within the temperature range ($R^2 > 0.98$). In the frequency range (1-50 Hz), the product shows weak gel behavior. Modified Cox Merz rule can be useful where it was revealed that the steady-state viscosity is identical to complex viscosity raised to power α.