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Rheology of Karmatta Leaves (*Ipomoea aquatic*) Puree and its Yield Value Comparision

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Abstract: Semi liquid foods in form of purees are widely encountered in the recent decade. These purees are a dispersion of solid particles in the fluid medium. The rheological studies of purees are an important parameter for design and evaluation of process and consumer acceptability. The viscosity of fluids widely depends on temperature, composition, and its shear stress. In the initial part of investigation, rheology of various purees such as ginger, ipomoea aquatica, coriander and mint puree were studied at room temperature. Measurements and calculations of different yield stress by Hershel Buckley model. In the present study, the karmatta (*Ipomoea aquatic*) puree was investigated at different temperatures (343K, 353K, 363K and Unblanched) by varying angular frequency from 0.1 to 100 rad/s. The wide range of shear rates was achieved for rheological characterization of the purees. The structural degradation with time by shearing signifies the characteristic of the non-Newtonian flow of purees. Storage modulus G' (Pa) and loss modulus G'' (Pa) were found to increase with an increase in frequency and decrease with strain. The viscosity was observed to decrease with shear rate due to change in fluid rheology with blanching media in terms of various flow models.

Keywords : Rheology, Purees, Food.