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Rheological characteristics of muskmelon (cantaloupe) pulp

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ABSTRACT : The rheological characteristics of musk melon (cantaloupe) pulp was evaluated with a view to determine its flow behaviour, yield stress and applicability of common rheological models. The experimental data on rheological behaviour were analyzed on the basis of four models *viz.*, Ostwald, Casson, Bingham and Herschel-Bulkley (H-B). However, Herschel-Bulkley model showed best fit. Consistency index (K) was found to decrease with increase in temperature. The yield stress value determined by three methods showed in the range of 3.6 to 4.1 Pa. Yield stress calculated from stress-strain plot showed the maximum value. Overall the rheological behaviour of musk melon pulp followed the pseudo plastic with yield stress.

KEY WORDS : Fruit pulp, Rheology, Muskmelon, Flow behaviour, Modelling

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