Title Effect of temperature on the rheological behaviour of Josapine pineapple pulp (*Ananas comosus* L.)

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Abstract

The temperature effect on the rheological behaviour of 30% Josapine pineapple pulp in juice has been determined over a wide range of temperature (5 to 65°C) by using a rotational rheometer. The speed of the rotating cylinder varied from 1 to 300 S^{-1}. These juices, containing pulp, behaved as Non Newtonian with yield stress. The Bingham equation was observed to describe best the relationship between the shear stress and shear rate. The average value of yield stress was 0.566 Pa and plastic viscosity was in the range 0.0312 to 0.0510 Pas. The plastic viscosity decreased with an increase in temperature. The effect of temperature on their plastic viscosity can be described by an Arrhenius-type equation. The values of the K_0 was 0.0038 Pas and activation energy (E_a) was 5871.10 J/mol.