Thesis Title	Thermophysical Properties of Jackfruit Flesh
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Abstract

The effect of the related factors on specific heat, thermal conductivity and thermal diffusivity of jackfruit flesh was investigated for temperature range of above the freezing point (60-90°C) with moisture content range 30-75 percent and below the freezing point (-26 to -10°C) with moisture content range 45-75 percent. The specific heat was measured by the Differential Scanning Calorimeter (DSC). The bulk thermal conductivity was performed using the Line Heat Source (probe) Method. The bulk thermal diffusivity was calculated directly from experimentally determined bulk thermal conductivity, specific heat and bulk density values.

The bulk thermal conductivity was found to depend on the moisture content, the temperature and the arrangement of jackfruit flesh in different direction. The specific heat and the calculated bulk thermal diffusivity were dependent on the moisture content and the temperature. The empirical models as a function of moisture content and temperature for each thermal property were obtained. Most of the previously proposed models were not accurately predicted the thermal properties of jackfruit flesh at investigated moisture content and temperature range.

Keywords : Jackfruit/ Specific Heat/ Thermal Conductivity/ Thermal Diffusivity