

Specific heat, thermal conductivity and thermal diffusivity of jackfruit flesh were studied. The effect of their related factor on these properties was investigated for temperature range of above the freezing point (60-90°C) with moisture content range 30-75% and below the freezing point (-10 to -26°C) with moisture content range 45-75%. 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 depend on the moisture content and the temperature. The bulk thermal conductivity, the specific heat and the bulk thermal diffusivity were found to be increasing with an increase in moisture content. The thermal conductivity and thermal diffusivity in bulk increase with the increase in temperature above freezing point and increase with the decrease in temperature below freezing point. The values of specific heat above and below the freezing point increase with increase in temperature. The empirical correlation of these properties with their related factor was obtained.