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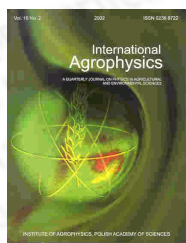
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Thermophysical properties of granular food materials

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abstract The present work deals with thermophysical properties of granular food materials – grains and seeds. The results of measurement of the specific heat at the constant pressure and results of the thermal conductivity measurement of corn grains and colza are presented as a function of temperature. Measurements of the specific heat are performed by differential scanning calorimetry and the thermal conductivity is measured using the hot-wire method. Description of measurement methods and measuring equipment is presented. Differential scanning calorimeter is used for measuring the temperature dependence of the specific heat. The probe modification of the standard hot wire method is utilized as the measuring technique and computer-controlled experimental apparatus for measuring the thermal conductivity is used. The moisture content of the samples was determined by electronic (conduction) moisture meter. Dependence of thermophysical properties, ie the specific heat and the thermal conductivity on the temperature are presented.

keywords food properties, specific heat, thermal conductivity

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