

## Pengembangan Kalorimeter Api untuk Karakterisasi Sifat Bakar Material

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### Abstrak

The development of a fire calorimeter (Prototype-I) equipped with an exhaust gas installation, a fluid flow rate measurement apparatus and a gas composition analyzer has enabled combustibility tests of materials (i. e. estimation of heat release rate) by means of oxygen consumption measurements. Two wood species, prepared with across and along grain orientations were used in this work. The incident heat flux levels were varied between 5 to 17 kW/m<sup>2</sup>. This paper examines the effects of wood species and heat flux level on the time to ignition, mass loss rate, heat release rate and the correlation established. The outcomes are in good agreements with those reported in the literatures.