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## **DETERMINATION OF THE THERMAL PROPERTIES OF AGRICULTURAL WASTE**

One of the solutions of the present energy problems is to burn biomass. This is not the best utilization of the biomass, but energetically it is a solution, also. This biomass can be forestry waste, wood to burn, waste timber, waste paper, food residue, in cases plastic, or any other burnable materials. To answer the general burning energy questions, it is needed to determine the heat freed by burning the biomass. There are standardized methods and devices for that, but their draw-back is that the quantity of the sample is, generally speaking, not very big, rather minimal, and in most cases the equipment is closed, the burning process is confined. After sampling a lot of samples, it is obvious that the general method is not good enough to characterize greater quantity material. There are lot of methods to overcome these phenomena, but we have developed an equipment and a method to make a reliable investigation. In this research instead of handling a few tenths of a gramm, we made an equipment useful of burning 10-20 g of biomass in one step. This device is capable to determine the thermal parameters, and it is an open system, in which there are exhaust gases. We measure the thermal and chemical parameters of the exhaust gases, and their taken energies are also counted in. The device is useful in determination of produced energies and also in estimation of environmentally harmful emissions. The research was financed by the grant EFOP-3.6.2-16-2017-00018.