

## EVALUATION OF THE THERMAL BEHAVIOUR OF AGRICULTURAL WASTES FOR POSSIBLE USE IN THE BIOMASS PELLETS INDUSTRY

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**Abstract.** This paper tackles the potential uses of agricultural wastes (sawdust, sunflower seed shells, pumpkin seed shells, cherry pits, walnut shells, and green walnut shells) for the production of pellets. Combustion heat was determined for these wastes and their thermal decomposition in an air atmosphere was analysed. Five types of mini-pellets were made from different combinations of available wastes and their thermal behaviour was analysed by the microscale combustion calorimetry method. The results were compared with those obtained for pellets available on the market and it was concluded that the mini-pellets obtained from agricultural wastes can be used to maintain combustion in heating systems based on pellets boilers.

**Keywords:** waste, biomass pellet, combustion heat, thermogravimetric analysis, microscale combustion calorimetry.

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