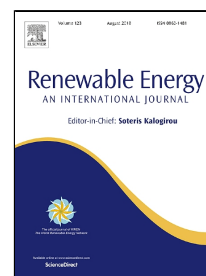


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Development of biomass fast proximate analysis by thermogravimetric scale

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1 **DEVELOPMENT OF BIOMASS FAST PROXIMATE ANALYSIS BY**
2 **THERMOGRAVIMETRIC SCALE**

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10
11 **Abstract**

12
13 EN norms set the methods for determining the ash and volatile content in biomass.
14 These establish the use of a muffle to heat the samples at temperatures of 550°C and
15 900°C respectively, with a minimum analysis time of 4h as standard method. The
16 objective of this work was to reduce significantly the analysis times, making very short
17 heating periods using a thermogravimetric scale (TGA), and to apply an equation to the
18 residual weight to obtain the weight of ash, volatiles and fixed carbon in biomass
19 samples. We analyzed the factors: the temperature ramp, atmosphere and airflow in the
20 determination. In this work new validated methods were developed with an analysis
21 time of 10-20 min.

22
23 Keywords: biomass, biofuel, pruning residues, energy wood

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