

Some Laboratory Studies on the Carbonization of Briquetted Tropical Wood Sawdust

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Abstract

Commercially produced tropical wood sawdust briquettes were carbonized in our laboratory using a muffle furnace. The carbonization was done at different terminal temperatures with different rates of temperature increase. The emissions produced during the carbonization process were also condensed and collected. The results indicate that charcoal, of higher yield, lower moisture and with fewer numbers of cracks appearing on the product, are produced when the rate of heating is slower. Fixed carbon contents (dry basis) as high as 86% can be achieved when the sample is carbonized at a terminal temperature of 650 oC. The amount of condensate collected was found to be quite independent of the terminal carbonization temperature when the heating rate was low but decreased as terminal temperature increased when the heating rate was higher. The pH value of all condensates was found to be 3.

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