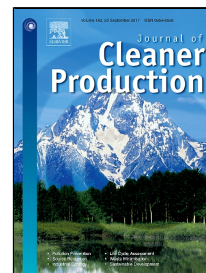


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Thermogravimetric Catalytic Pyrolysis and Kinetic Studies of Coconut Copra and Rice Husk for Possible Maximum Production of Pyrolysis Oil



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21 **Abstract**

22
23 The main objective of the present work is to study the effect of Nickel-Cerium/Alumina
24 multifunctional catalyst (Ni-Ce/Al₂O₃) mass loading on pyrolysis of coconut copra and rice husk
25 via thermogravimetric analysis. The sample is pyrolyzed from 30 °C up to 700 °C at a constant
26 heating rate of 10 °C/min in nitrogen environment flowing at 150 mL/min. The multifunctional
27 catalyst (Ni-Ce/Al₂O₃) was prepared via incipient wet impregnation method. Pyrolysis
28 feedstocks were prepared based on biomass to catalyst mass loading ratio. The TG-DTG curve
29 shows that the presences of catalyst significantly affect the devolatilization rate of biomass.
30 Among TGA-pyrolyzed coconut copra samples, the CC-3 (1:0.15) has achieved the highest mass

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