The Use Of Cassava Skin Waste (*Manihot esculenta* Crantz) As Activated Carbon To Adsorb Exhaust Emissions

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ABSTRACK

Exhaust emission are the result of the combustion of motorized vehicles that contain various pollutant which can cause more human problems. One of the things that can be done to reduce the level of exhaust emissions is by adding activated carbon from cassava skin waste to the exhaust. The study aims to analyze the effect of the use of activated carbon of cassava skin waste on motor vehicle exhaust emissions compared to standard exhaust. Retrival of exhaust gas data using a gas analyzer T 161 Didacta Italia. Comparison of the use of standard exhaust with activated carbon of cassava skin waste is given a 1500 rpm, 3000 rpm, 4500 rpm engine rotation with CO, CO_2, O_2 and HC gas content. The result of the lowest CO gas content in the use of KOH activated charcoal is 0,72 %Vol at 1500 rpm, the lowest CO_2 exhaust gas is used in TiO_2 activated charcoal is 1,4 %Vol at 1500 rpm, higher O_2 content from the standard that is equal to 18,3 %Vol at 1500 rpm rotation and the lowest HC level in use of activated charcoal TiO2 is 94 %Vol at 4500 rpm rotation.

Keyword: *activated carbon, rpm, gas (CO, CO_2, O_2, HC), cassava skin waste*