



Use Of Palm Oil In Stoves And Lamps

47. Buteko

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Introduction:

Palm oil is the product from palm tree fruits. Palm trees are grown in tropical region areas. Kigoma region is among the regions where palm trees are grown. Currently palm oil is used as cooking oil, commercial crop as raw material for soap making and human body softening.

Almost 96% of the people in Kigoma region use Charcoal, fire wood, kerosene as cooking and lighting fuel which are not friendly to our environments, expensive and not easily available. Kerosene costs 2000Tshs – 2500Tshs per litre, charcoal costs 23,000Tshs – 28,000Tshs per bag, While the palm oil costs 700-1000Tshs per litre, , so palm oil is very cheap and available, compared to kerosene and charcoal. The aim of doing this research is to find the possible solutions of overcoming the problems of scarcity of fuel, environmental pollution and poverty in this region.

Method:

Materials used for making this palm oil stove are three cans, pipes, cotton vermicelli, cooking pan, matchbox, palm oil, kerosene stove for boiling palm oil and palm oil stove as well.

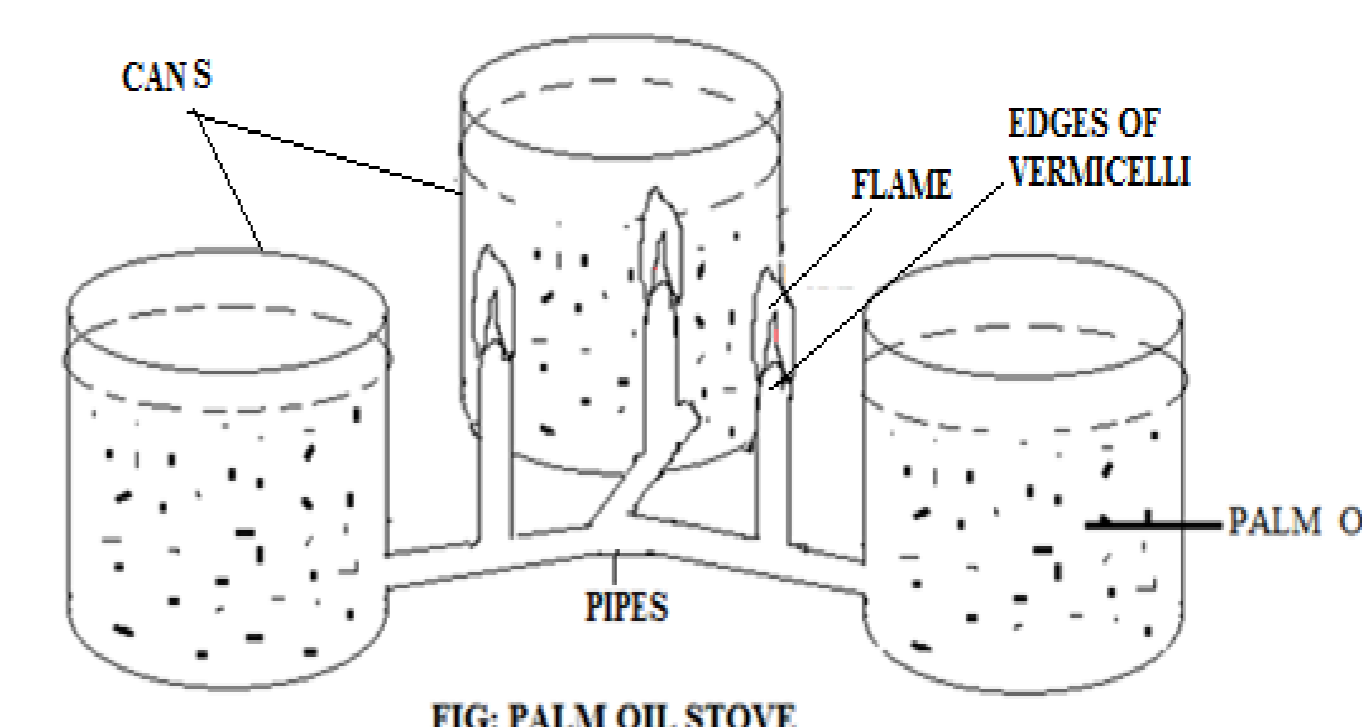
Boil palm oil before filling it into the can to reduce its density, adhesion and soot.

The cans are joined by pipes, within the pipes- passes vermicelli.

Gravitational force and pressure cause palm oil to move from the cans through cotton vermicelli in pipes. In the vermicelli there is low capillarity of palm oil. Pressure causes oil to move to the edges of vermicelli. At the edges of the vermicelli there are flames which are supported by oxygen gas.

Results:

Several experiments of using palm oil in palm oil stove shows very fine flame with little soot and can consume little volume of palm oil, about half a litre compared to kerosene. These flames can be used in cooking, lighting and boiling purposes.



Conclusions:

This research aimed to find the possible solutions of using available and cheap resources to overcome fuel problems in the society. Palm oil can be used as a source of energy when used in palm oil stove. The use of palm oil can conserve the environment. Also it is cheap compared to other sources of energy like kerosene, gas and electricity.

Other continuing research up our current study they would find out how can they modify the palm oil stove structure so that can be more efficiently in boiling and cooking purposes.

References:

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Acknowledgements: Thank you all who helped in one way or another to make this research done successively. These include Miss Berther Ntanda(Headmistress), Mr. Johanes Kiminsha(teacher), people around Buteko street who gave us cooperation during research process and all teachers in Buteko Secondary school.

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