Banscil: The Carbon Lead and Casing Wrapping Making in Pencil from Wasted Banana Peels

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Most pencils today are made from wood and carbon-lead which are obtained from graphite. The uses of wood by cutting off trees will affect the environment today. The project's purpose is to make a pencil from banana peels which are available anywhere in most countries with large quantity and to make use of the banana peels in other applications. Wasted banana peels can be used to make pencils; including the carbon-lead used to write. One of our hypotheses is the longer the heating time, the harder the carbon-lead produced. Producing Banscil requires three processes. In making the carbon-lead, banana peels are dried in an oven at 100oC for 24 hours. Then, the dried banana peels are burned inside a furnace at 500oC for 3 hours to produce activated carbon. The activated carbons are mashed. A composition of 66% activated carbon and 34% clay is moulded into a long cylindrical shape using a moulding device. The uses of sodium carbonate and hydroxypropyl methylcellulose in the composition are to bind the carbon and clay. The carbon-clay composition is burned in a furnace at 130oC for two hours to harden the carbon-lead. To make the wrappings, banana peels are blended with water into pulps. Polymethyl acrylate flocculants agent is added as a binder. The fibres are filtered using a sieve to get the banana fibres. The fibres are made into a 21.0cm X 29.7cm rectangular shape. The fibres are dried for 54 hours at room temperature. Lastly, the carbon-lead is wrapped using the wrapping and a Banscil is produced. Hardness test is done on the Banscil. Based on the result, the grading of the carbon-lead is almost similar to a HB and Light Charcoal Pencil.