

Appendix

**Determine The Eligibility of Using Bamboo Gigantochloa Ligulata
& Bamboo Gigantochloa Scortechinii in The Field of Construction**

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2022**

Note: Experiments for determining physical, mechanical, and chemical properties of two different types of bamboo (*Bamboo Gigantochloa Ligulata* & *Bamboo Gigantochloa Scortechinii*). The experimental steps will be shown as below using one of the prepared samples for audience's deeper understanding.

I) Sample Preparation



Figure 1: Preparation of bamboo samples was conducted

II) Compressive Test



Figure 2: Compressive test was conducted



Figure 3: The image of one of bamboo samples after compressed



Figure 4: The side-viewed of the compressed bamboo

III) Tensile Test



Figure 5: Preparation of sample for tensile test (T-peel test)



Figure 6: Tensile (T-peel) test was conducted



Figure 7: The image of sample after T-peel test

IV) NaOH Solubility



Figure 8: Preparing bamboo sample for making bamboo sawdust later



Figure 9: A technician was teaching me the way to use Wiley mill



Figure 10: Sawdust sample

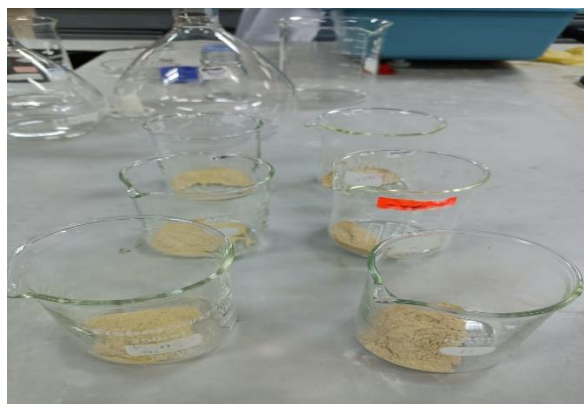


Figure 11: Sawdust sample which was put into the 100ml beaker

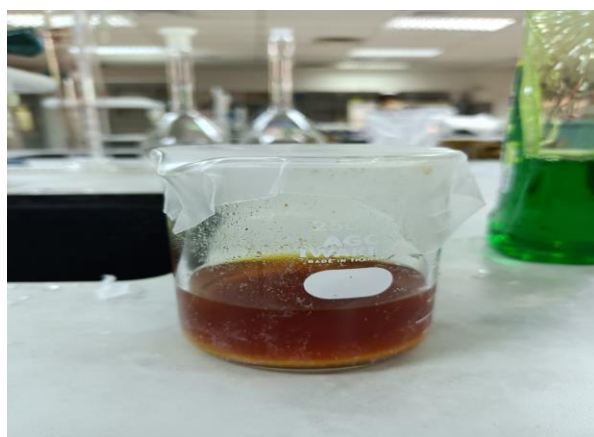


Figure 12: Sawdust sample which was immersed into NaOH



Figure 13: Filtering the NaOH-sawdust solution



Figure 14: Filtered sawdust



Figure 15: Drying wet sawdust in the oven



Figure 16: Dried sawdust (# Before extraction: 2.00g; # then calculate the weight of dried sawdust to calculate how much content was extracted from the sawdust into the NaOH)

V) Percentage of Benzene-Ethanol Extractives

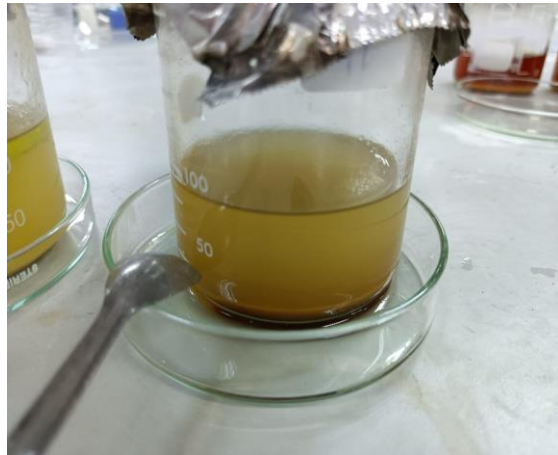


Figure 17: Benzene-ethanol-sawdust solution



Figure 18: Filtering the solution as shown in figure 17



Figure 19: Filtered sawdust



Figure 20: Dried sawdust (# Weight of sawdust before extraction: 2.00 g; # then calculate the weight of dried sawdust to calculate how much content was extracted from the sawdust into the benzene-ethanol solution)