



The available timber supply is shrinking and the trend is toward lower quality and more expensive timber for manufacture of wood product. Since the demand for these material will continue, an alternative or substitute for timber such as bamboo laminated is desirable. Bamboo has susceptible character to powder beetles attack, it must pass through preservation process before bamboo applied as laminating materials. Chemical preservative materials that use in industrial process have a negative impact for the environment. An alternative preservative materials which more friendly to human and environment such as tobacco extract is needed. The most effective concentration of tobacco extract and those influence to the adhesive materials hasn't been well known.

This research was conducted to investigate the influence of tobacco extract to nature and mechanic behavior of laminated bamboo. Dried tobacco flake mixed with water in variable concentration 100, 125, 150 and 175 gram/liter. Bamboo split were given treatment in boiling water with tobacco extract solutions. As benchmarking, bamboo split also preserved with boiling water (without preservatives materials) and 5% concentration of borax. Non preservative bamboo used as a control.

The result of experiment showed that tobacco extract concentration 150 gram/liter caused insect mortality equal to 61,33% and decreased weight equal to 1,87%, it's effective for used as a preservative compare with the three concentration of it. The value of water content and density observation, showed that preservation with 150 gram/liter extract tobacco comparable with non preservative boiling preservation, and produced smaller value of water content and bigger value of density than borax preservative. Preservation with 150 gram/liter tobacco extract produced highest value for compression parallel to grain and modulus of elasticity of bamboo Petung mechanic properties equal to 277,95 MPa and 170,34 MPa, respectively. Mechanical properties of bamboo laminated that significantly influence by preservative variation showed that highest value for compression parallel to grain and modulus of elasticity equal to 66,09 MPa and 127,12 MPa, respectively reached by preservation with 100 gram/liter tobacco extract.

KEYWORDS : *preservation, tobacco extract, bamboo laminated.*