

**FINISHING PROPERTIES OF POLYURETHANE LACQUER AND
NITROCELLULOSE LACQUER ON MENGGULANG (*Heritiera* sp)**

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ABSTRACT

FINISHING PROPERTIES OF NITROCELLULOSE LACQUER AND POLYURETHANE LACQUER ON MENGGULANG (*Heritiera spp.*)

Finishing is the last step that required for production of furniture. The importance of finishing is to protect the wood from chemical, scratches, impact and attack by insect or fungi. Furthermore, finishing can coloring the wood and enhance the wood natural beauty. In this study, mengkulang (*Heritiera spp.*) was used to overcome the shortage of three popular medium hardwoods in Malaysia such as kempas, keruing and kapur. The availability of mengkulang as a medium hardwood species can replace those timbers in furniture making. This study is carried out to investigate the effectiveness of two types finishing material which are polyurethane lacquer and nitrocellulose lacquer applied on the wood surface of mengkulang (*Heritiera spp.*) by using spray gun. This study also determines the suitability of three finishing systems using polyurethane lacquer and nitrocellulose lacquer that applied on mengkulang wood. Four tested was conducted on this study such as adhesion test for cross cut test (ASTM D3359), pencil hardness test (ASTM D3363), resistance to household test (ASTM D1308) and cold-check test (ASTM D1211-97). From this study, polyurethane lacquer shows good performance in resistant to household test, cold check test, pencil hardness test and adhesion test (cross cut test). However, nitrocellulose lacquer only shows good performance in resistant to household test and cold check test. System C (2TC) is the best finishing system among system A (1S+1TC) and system B (2S+1TC). This is because; system C has good performance for all four testing. Therefore, system C will be recommended and suitable to apply with nitrocellulose lacquer and polyurethane lacquer because has two coatings that will more protect mengkulang wood from scratches, chemical, heat and moisture. Generally, the application of polyurethane lacquer and nitrocellulose lacquer were suitable to apply as finishing materials for mengkulang wood.