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Evaluation of wood preservatives against the drywood termite, Incisitermes minor

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Laboratory evaluation of wood preservatives was performed to determine their resistance to the invasive termite, *I. minor*. Wood preservatives listed in JIS K 1570:2010 were impregnated to sugi sapwood samples (20 mm x 20 mm x 10 mm) to K3 and K4 levels in Japanese Agricultural Standard (JAS). Non-fixative waterborne disodium octaborate tetrahydrate (DOT) was impregnated to the same size of sugi sapwood to two levels of the retention at 3 kg/m³ boric acid equivalent (BAE) and 6 kg/m³ BAE. Each treated sample was forced to feed on twenty psudergates of *I. minor* under 26 °C, 75 % R.H. for 6 weeks. The average mass loss of untreated sugi sapwood reached over 15 %, and those of treated specimens with wood preservatives listed in JIS K 1570 were under 3 % even after leaching procedure. The average mass losses of treated specimens with DOT at 3 kg/m³ BAE and 6 kg/m³ BAE were 4 % and 2 %, respectively. Timbers used in interior and dry conditions are recommended to be treated at K1 level in JAS with boron compound at over 1.2 kg/m³ BAE for protecting from biodeterioration by wood-boring beetles and drywood termites, considering ISO Use Classification System. Our results suggest that higher retention level of wood preservatives in timbers is necessary for resistance to the drywood termite, *I. minor*.