

Purun tikus (*Eleocharis dulcis*) fiber composition as cement board composite material

By: Ninis Hadi Haryanti, Henry Wardhana

Key Words: Purun tikus fiber, Composite cement board, Material composition

J. Bio. Env. Sci. 11(3), 137-142, September 2017.

Certification: jbes 2017 0072

Abstract

Various types of fiber plants thrive in Indonesia, such as kenaf (*Hibiscus canabinus*), alang-alang (*Imperata cylindrical*), and purun tikus (*Eleocharis dulcis*). The existence of purun tikus is still not utilized optimally. The objective of this research is to determine the right mixture of purun tikus fiber and composition effect from the mixture on physical and mechanical properties of the composite cement board. The results show that all composite cement boards made from purun tikus fiber with the composition of 75g fiber and 100g fiber have fulfilled the requirements of SNI 03-2104-1991 on physical and mechanical properties. Based on Anova statistical analysis and Duncan analysis, the mixture materials composition of 75g and 100g purun tikus fiber affects on physical properties (moisture content, density, thickness increment), and mechanical properties (MoR) of composite cement board. In general, the addition of fiber will increase moisture content, thickness, and MoR of composite cement board, except thickness increment. The composition of the 100g purun tikus fiber with the matrix intensified form is an elected composition to be used as a composite cement board.

Ninis Hadi Haryanti, Henry Wardhana.

Purun tikus (*Eleocharis dulcis*) fiber composition as cement board composite material.

J. Bio. Env. Sci. 11(3), 137-142, September 2017.

<http://www.innspub.net/jbes/purun-tikus-eleocharis-dulcis-fiber-composition-cement-board-composite-material/>