Pengaruh Perbedaan Suhu dan Lama Waktu Pengempaan Papan Partikel Berbahan Baku Kulit Batang Sagu Dengan Perekat Gambir (*Uncaria gambir*, Roxb) Terhadap Sifat Fisis dan Mekanis

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ABSTRAK

Penelitian ini bertujuan untuk mengetahui pengaruh suhu dan lama waktu pengempaan serta interaksi antara suhu dan lama waktu pengempaan pada pembuatan papan partikel berbahan baku kulit batang sagu terhadap sifat fisis dan mekanis papan partikel. Penelitian menggunakan Rancangan Acak Lengkap Faktorial 3 x 3 dan dua ulangan, yaitu suhu pengempaan dan lama waktu pengempaan; A_1B_1 (140^0C : 10 menit), A_1B_2 (140^0C : 15 menit), A_1B_3 (140^0C : 20 menit), A_2B_1 (150^0C : 10 menit), A_2B_2 (150^0C : 15 menit), A_2B_3 (150^0C : 20 menit), A_3B_1 (160^0C : 10 menit), A_3B_2 (160^0C : 15 menit), A_3B_3 (160^0C : 20 menit). Pengujian sifat papan partikel meliputi sifat fisis dan mekanis. Hasil penelitian menunjukkan terdapatnya interaksi antara suhu dan lamanya waktu kempa terhadap daya serap air, pengembangan tebal, keteguhan patah dan keteguhan rekat internal, namun tidak terdapat interaksi terhadap kerapatan, kadar air dan keteguhan tekan sejajar permukaan. Hasil pengujian menunjukkan papan partikel terbaik adalah perlakuan A_3B_2 (papan partikel dengan suhu pengempaan 160^0C dan lama waktu pengempaan 15 menit), dimana keteguhan tekan sejajar permukaan serta keteguhan rekat (IB) yang besar dan keteguhan patah (MOR), kerapatan dan kadar air memenuhi standar SNI 03-2105-2006.

Kata Kunci - **papan partikel, kulit batang sagu, *Uncaria gambir*, Roxb**

The Effect of Difference Temperature and Duration of Press Particle Board Made From Peels Stem Sago with Gambier Baggases (*Uncaria gambier*, Roxb) Toward Physical Properties and Mechanical Properties

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ABSTRACT

This research was aimed to determine the effect of temperature and duration press and the interaction between temperature and duration press in the manufacture of particle board made from sago peels of the physical and mechanical properties of particle board. Research used a completely randomized design factorial 3 x 3 with two replications. Temperature and duration press; A_1B_1 (140^0C:10 minutes), A_1B_2 (140^0C:15 minutes), A_1B_3 (140^0C : 20 minutes), A_2B_1 (150^0C : 10 minutes), A_2B_2 (150^0C:15 minutes), A_2B_3 (150^0C:20 minutes), A_3B_1 (160^0C:10 minutes), A_3B_2 (160^0C:15 minutes), A_3B_3 (160^0C:20 minutes). The parameters of particle board were physical and mechanical properties. The results showed the presence of the interaction between temperature and duration press felts against water absorption, thickness swelling, modulus of repture and internal bonding strength, but there was not interaction on the density, moisture content and firmness press parallel to the surface. The results showed the particle board was best to treatment A_3B_2 (particle board with temperature 160^0C and duration press 15 minutes), with constancy press parallel to the surface and internal bonding (IB), Modulus of Rupture (MOR) and the moisture content meets the standard ISO 03 -2105-2006.

Keywords - **particle board, peels stem sago, *Uncaria gambir*, Roxb**