

Olive Seed Tannins as Bioadhesives for Manufacturing Wood-Based Panels

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Abstract : The olive seed is a by-product of the olive oil production industry. Biuret test and ferric chloride test revealed that water or alkali NaOH extractions of olive seed flour are rich in proteins and tannins. Both protein and tannins are well-known bio-based wood adhesives in the wood-based panel industry. In general, tannins-based adhesives show better mechanical and physical properties than protein wood adhesives. This paper explores different methods of extracting tannins from olive seed flour against the tannins yield and their applications as bio-based adhesives in wood-based panels. Once investigated, the physical and the mechanical properties of wood-based panels made using bio-adhesives based tannins extracted from olive seed flour revealed that the resulting products seemed to satisfy the Japanese Industrial Standards JIS A 5908:2015.

Keywords : bio-adhesives, olive seed flour, tannins, wood-based panels

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