

Natural Adhesives from Agricultural By-products: A Review

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Abstract

There still exist adhesives that have toxic compounds or consist of those materials in both our life and lots of industries. For instance, formaldehyde adhesive had been still used for woodworking and some medical adhesives had been considered as toxicity problems. In this situation, natural adhesives from raw materials have been suggested as an one of considerable interests. Natural adhesives in recent have been reported fabrication methods via biological materials such as proteins, celluloses, and starches. By-products derived from agricultural something have them richly and each has additional special properties. Using these properties to make natural adhesives, unique adhesives would be attained. In particular, rice-based adhesive is such a good example. Rice-based by-product adhesives have interestingly some pros pertaining to high adhesive strength, excellent water resistance and could dramatically be reduced a formaldehyde a harmful component of plywood. Hence, rice-based adhesive like glues could be applied to lots of industries including agricultural and biological technology. This review paper highlighted some recent development on natural adhesives as a promising biomaterial for agricultural and biological technology fields. The design of agricultural by-product-based natural adhesives were described to demonstrate the application of agricultural and biological technology.

Keywords

Natural adhesive, Glue, Bioresources, By-products, Food industry

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