ABSTRACT

(*LITERATURE REVIEW*)

INCREASING THE VALUE OF THE BENEFITS OF CASSAVA SKIN WASTE AS A SOURCE OF CELLULOSE

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Cassava tubers are often used by the general public to produce tapioca flour and also as a substitute for staple foods. However, the use of cassava as a food ingredient also creates waste that comes from the cassava peel itself, which until now has only become organic waste that has not been used properly.

The results of the initial analysis of cassava peels are 36.5% starch or starch and 80% -85% cellulose by weight of cassava peels. Cassava peels containing cellulose can be developed in the manufacture of sodium carboxymethyl cellulose, cassava peels also have the potential to be used as raw materials for making alternative energy, namely bioethanol.

The purpose of this study is that it can be used as a reference in processing cassava peel waste and to increase the use value and benefits of the cassava peel waste itself. The methodology used in this study is a literature review using 3 national literatures.

Based on a review of 3 articles, it is known that sodium carboxymethylcellulose has the potential to be synthesized from cassava peel (Manihot utilissima). The isolation method of Sodium carboxymethylcellulose used still needs to be studied again because the resulting sodium carboxymethylcellulose has a substitution degree (DS) of 0.47, a viscosity of < 10 dpas and a low purity of 76.6%. water, water vapor transfer, length of time for biodegradation, tensile strength and elongation. PS4 treatment (8.5 g cassava peel starch: 1.5 g peanut shell cellulose) was the best treatment with a water resistance value of 84.09%, water vapor transfer rate 6.77 g/m2/hour, biodegradation for 8 days, tensile strength of 2.72 MPa, and elongation of 8.75%. and the highest alcohol concentration using HCl catalyst is 29% by volume, for sulfuric acid catalyst is 30% by volume.

Keywords: Cassava skin, Cellulose