

DESIGN A BIOETHANOL DISTILLATION TOOL

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ABSTRACT

Bioethanol is one of the biofuels that is present as an alternative fuel that is more environmentally friendly and renewable. Bioethanol can be made from materials containing simple sugars, starches, and fibrous materials through a fermentation process. One of the plants that can be used as bioethanol raw material is cassava and sago which is easily found in the sweeping area, especially Bengkalis district. The material to be used in this study is cassava peel and sago pulp because it saves costs and uses unused waste. The purpose of this study is to make a bioethanol distillation device. The purpose of this study is to compare the results of distillation of sago pulp and cassava peel. This research begins by preparing raw materials prepared by fermentation and the final installation by distillation. The instrument used in this test was the first time a distillation boiler, condenser and temperature measuring device and a cooling pump. The results obtained from the distillation test are 380 ml of cassava peel ethanol and 280 ml of sago pulp ethanol this is caused by the consumption contained in cassava peel greater than the sago pulp.

Keywords: *Bioethanol, Fermentation, Distillation Cassava Skin, Sago pulp*