The use of fossil fuels produces CO\textsubscript{2} emission continue to rise when necessary reduction of CO\textsubscript{2} emissions, using waste materials that are not used, then the problem for the environment can be overcome, it can even be transformed into a versatile product, which can increase the economic value and support creation of a healthy environment. Cassava peel is a waste containing high carbohydrates such as starch and cellulose, thereby potentially as an alternative raw material for bioethanol. Bioethanol is an alcohol compound obtained by biomass fermentation process with the help of microorganisms. The step of pretreatment is done to obtain a solid substrate further dried cassava peel soaked with a solution of NaOH (1%, 5%, 10%), the best result in submersion of NaOH 10% that of lignin remaining in the peel of cassava powder yield 2.035% and the highest glucose is 4.249%. With the ever chemical hydrolysis in H\textsubscript{2}SO\textsubscript{4} acid (0.25%, 2.5%, 4%), which produces the best results of glucose on acid hydrolysis of 4% H\textsubscript{2}SO\textsubscript{4} that is equal to 4.160% and biological hydrolysis of the \textit{Trichoderma viride} (0.5%, 0, 75% and 1%) v/v, which produces the best results in the hydrolysis of glucose \textit{T. viride} 1% at 3.005%. The process of fermentation, glucose would be broken down into ethanol by the yeast \textit{Saccharomyces cerevisiae} by 20% during the 96 hours to obtain bioethanol with the best result in variation results H\textsubscript{2}SO\textsubscript{4} acid hydrolysis of 4% over the 240 minutes that is producing ethanol at 0.225%.

**Keywords:** Bioethanol, fermentation, acid hydrolysis, pretreatment, \textit{Saccharomyces cerevisiae}, \textit{Trichoderma viride}