ABSTRACT

Castor oil used as a raw material of soap because it has a high content of triglycerides and has anti-microbial properties of bacterial pathogens that are more active to get rid of the bacteria. So it can be used to replace raw materials of soap from palm oil. The planned factory is located in Sumbawa, Flores and operated continuously for 24 hours per day and 330 days per year. The resulting production capacity of 13,000 kg / day soap.

Transparent soap factory production process of castor oil with a continuous process of saponification of triglycerides is composed of 3 stages, the stages of the process, drying and finishing. Performed on the stages of the process is to mix the oil is reacted with caustic soda in a reactor at a temperature of 90°C - 120°C, a pressure of 1 atm with residence times of 11 minutes to form soap and glycerin. The second stage of drying by reducing the water content in the soap chips automizer tool with vacuum pressure conditions. At the stage of finishing the work to the addition of additives, printing and packaging.

The raw material used is the castor oil of 7500 kg / day and NaOH at 2316.2 kg / day. Water requirements in transparent soap factory include water sanitation by 1 m³/day, of 6.4 m³/day of cooling water, boiler feed water at 209.14 m³/day and 4.48 m³/day of process water.

Keywords: transparent soap, castor oil, NaOH, saponification of triglycerides