SOLID SOAP FACTORY OF RBDPS (REFINED BLEACHED AND DEODORIZED PALM STEARINE) AND CNO (COCONUT NATURAL OIL) WITH PROCESS CONTINUOUS SAPONIFICATION OF TRIGLYCERIDES

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ABSTRACT

Solid soap factory of RBDPS and CNO established with the aim of meeting the needs of consumers will soap and glycerin which is a by-product of this factory.

The production process of solid soap factory RBDPS and CNO with triglyceride saponification process continuously consists of two stages, namely stage of the process and finishing. The process is to mix RBDPS and CNO with a 4:1 ratio at 1 atm pressure and 140°C temperature then the result is reacted with caustic soda to form soap and glycerin. The finishing stage consisting of two units. Both of these units serve as the stage of completion before the soap is marketed. The units are a drying unit which work in the vacuum condition at 70 cmHg pressure with 135°C temperature and the packaging unit which serves for the addition of addictive substances and printing.

The factory is located in West Sumatra planned and operated continuously for 24 hours per day and 330 days per year. The resulting production capacity of 97,000 kg/day of solid soap. Raw materials used are RBDPS at 69315.404 kg/day, CNO at 17328.851 kg/day and NaOH at 12940.956 kg/day as well as auxiliary materials are brine for 59166.882 kg/day, perfume of 1289.767 kg/day, dyes for 76.431 kg/day and tiona of 95.538 kg/day. Water needs on a solid soap factory include water sanitation by 1000.8 m³/day, cooling water at 21275.28 m³/day, boiler feed water for 2311.32 m³/day and process water at 65.18 m³/day.

Key words: solid soap, RBDPS, CNO, NaOH, saponification of triglycerides