

THE MAKING of A LIQUID SOAP PROCESS FROM USED WASTED COOKING OIL AND COCONUT OIL MIXTURE

Zulkarnain*), Utami Putri**)

*)Staf Pengajar, **) mahasiswa Jurusan Teknik Kimia Politeknik Negeri Sriwijaya
Jl. Srijaya Negara Bukit Besar, Palembang 30139-A, E-mail: zulkarnain@polsri.ac.id

ABSTRACT

This Moment, used frying oil has not been used well and only used discarded as household waste or industrial. Therefore, to use of used frying oil as raw material a liquid soap will provide added value for used frying oil. The main purpose of this research is to cultivate used frying oil become a liquid soap way saponification with potassium hydroxide . This research do with variation feed ratio that is used frying oil and coconut oil (0:1; 0,5:1; 1:1; 1,5:1; and 2:1) and time of saponification process (10, 20, 30, 45, and 55 minutes). Research results shows that so longer time of saponification process so lower pH liquid soap that produced. The long saponification process also resulted in the low water content that there is in soap. Beside that, time of saponification process can increase free fatty acid content in soap. Likewise with the number of soap, time of saponification process balanced straight with the number of soap. From research result obtained optimum condition in the making liquid soap that is on used frying oil and coconut oil ratio 2:1 during process time 45 minutes. Where the parameters that have been tested in accordance with standards of soap, such as pH is 10,3; water content is 42,7%; free fatty acid content is 2,256% and the number of soap is 43,126 mg KOH/gr.

Keyword: liquid soap, frying oil, saponification