SKRIPSI

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PENGARUH *ANTIFOAMING AGENT* TERHADAP HASIL REAKSI HIDROGENASI ASAM ANAKARDAT DENGAN KATALIS RANEY-NICKEL DALAM NaOH

FAKULTAS FARMASI UNIVERSITAS AIRLANGGA
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Lembar Pengesahan

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ABSTRACT

Anacardic acids, a brownish yellow thick liquid was isolated from Cashew Nut Shell Liquid (CNSL) with column chromatography method. This process gave 50-60% anacardic acids. Anacardic acids mainly contain trienes, dienes, monoenes, and saturated in the fifteen-carbon side chain. The aim of this research is to determine the influence of antifoaming agent in the hydrogenation anacardic acids with Raney nickel as the catalyst. The antifoaming agent which is used in this research was 2-octanol. The identification of hydrogenation product by determining the melting point, the stuctural groups with $FeCl_3$ and spectroscopy method.

Hydrogenation product was brownish crystals and was recrystalized by *n*-hexane to give white crystal (melting point = 83°C-84°C) and brown solid. The percentage of saturated anacardic acid without antifoaming agent gave 56% yield, while the percentage of saturated anacardic acid with antifoaming agent gave 52% yield. The HPLC analysis showed that there was a ghost peak. The analysis record told that the hydrogenation of anacardic acids was not done successfully. The usage of 2-octanol as an antifoaming agent would decrease the percentage of saturated anacardic acid, because it gave the difficulty of interaction between sodium anacardic acids and water. In laboratorium scale, the usage of antifoaming agent was not needed, but it needs another research to identify the usage of antifoaming agent in large scale.

Keywords: anacardic acids, saturated anacardic acids, hydrogenation, Raney nickel catalyst, 2-octanol, antifoaming agent.