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Deacidification of Crude Palm Oil using PVA-crosslinked PVDF Membrane

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Abstract

Over recent years, there has been an explosive growth of interest in the development of alternative approaches for crude palm oil (CPO) refining. During a typical refinery process, free fatty acid (FFA) is one of the key objectionable impurities that need to be reduced if not completely removed from CPO in order to minimize their detrimental effects on the oil quality. Polyvinylidene fluoride (PVDF) membrane shows great potential in removing FFA from CPO owing to its hydrophobic properties, high mechanical strength and good thermal stability. However, low concentration of FFA in CPO, which is normally ranging from 3 to 5%, has hindered the capability of the membranes to separate the trace amount of FFA from the bulk. Thus, modification of PVDF membrane is essential to enhance the interaction between the

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