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Abstract

Enzymatic Processing of Vegetable Oil Refining Byproducts., *M. Dasari, M. Abdullah, Feed Energy Company, Des Moines, IA, USA.*

Gums and soapstock are by products of chemical refining process vegetable oil. These products are further chemically processed to recover the fatty materials that can be used as animal feed ingredients. In some cases these byproducts are further refined to use in food industry. The fatty materials are recovered by hydrolyzing these products in presence of an strong inorganic acid at very low pH and temperatures close to boiling point of water. These severe processing conditions results in several reaction by products reducing the overall yield of the process. Moreover, these processes produce acid waste water that is very difficult to dispose due to its extremely high dissolved organic content. The overall objective of this research is to use enzymes to process these byproducts, as an environmentally friendly, green technology alternative to the traditional acid hydrolysis process. This paper will summarize our experiences in using several commercially available enzymes to process these byproducts.

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