

# **Review of Degumming and Refining Technologies**

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Vegetable oils and animal fats contain a number of non-desirable impurities, which need be removed to make the oil suitable for either human consumption or technical purposes, such as the production of biodiesel. Most of the impurities are soluble in the oil and require a chemical treatment to remove them. Degumming and alkali refining have been found to be one of the most effective ways of removing these impurities.

The need to find an effective method of separating cream from milk drove Gustav de Laval to invent the first fully effective continuous centrifugal separator. It was, however, success in the separation of stearin from partially crystallized fat that created an interest in fats and oils processing that eventually led to refining trials in 1892. Centrifugal separation techniques have come a long way since those early trials and today it is hard to imagine the production of edible fats and oils without the use of centrifugal separation equipment in one, or several, of the degumming and alkali refining steps.

The principles of the different degumming and refining process will be discussed. Operating results are highly dependent on the process conditions, as well as the working conditions of the centrifugal separators.