AOCS Short Course on Processing and Quality Control of Fats and Oils

June 26-28, 1978

Kellogg Center, Michigan State University

East Lansing, MI

For full program details and registration forms, write: AOCS Short Course, 508 S. Sixth St., Champaign, IL 61820. Registration is limited to 160 persons.

Raw Materials Handling and Control, E.H. Gustafson, Division Vice President, Cargill Inc.

The objective of this presentation is to discuss some of the commonly used methods for the handling of raw materials prior to processing and the controls necessary to limit deterioration of raw materials in storage. Reference is made to properties of major oil bearing raw materials and specific care needed in both storage and handling. Examples of typical handling and storage facilities will be given.

Antioxidant for Fats and Oils, E.R. Sherwin, Senior Chemist, Eastman Chemical Products Inc.

Use of antioxidants to enhance stability or shelf life of fats and oils is reviewed, including consideration of the nature of the fat and oil oxidation problem, the function of antioxidants in overcoming it, and the types of antioxidants currently available to a fat or oil processor. Also discussed are application techniques, oxidation and stability testing methods, analytical methods and regulatory limitations essential to the efficient and proper use of antioxidants in fats and oils.

Bleaching and Separation, L.L. Richardson, E.R. Butterworth, Filtrol Corporation

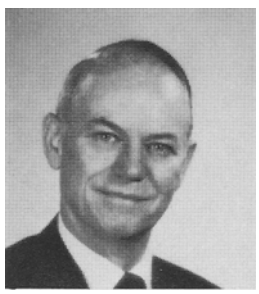
This presentation is divided into two parts. Bleaching of fats and oils is a relatively simple process whereby the clay adsorbent (bleaching clay) is intimately mixed with the oil under proper conditions to remove unwanted color bodies. This paper examines the bleaching process from the viewpoint of the properties of the bleaching clay. The properties of clay will be discussed relative to commercial performance characteristics. Economics relating to clay properties will also be examined. Separation is the removal of an undesirable portion of a fluid from that fluid. There are four generally recognized methods of separation: (a) mechanical – which may be filtration, settling or centrifuging; (b) electrical – such as an electrostatic precipitator; (c) chemical – such as solvent extraction, precipitation or adsorption; and (d) thermal – such as distillation or freeze drying. In the processing of fats and oils, mechanical, chemical and thermal separation methods are used to provide optimum shelf life in finished products. Techniques of separation are discussed, with emphasis on minimizing processing costs, leading to the goal of maximum profits.

Deodorization, Arnold M. Gavin, EMI Corporation

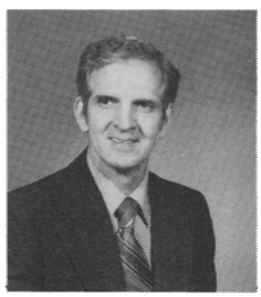
Deodorization of fats and oils is necessary to remove the disagreeable flavor and odors that are naturally present or created during processing. Steam stripping of the oil is used to remove these volatile flavor and odor components. This paper discusses the process specifications for deodorization and the mechanical design of edible oil deodorizers.

Interesterification of Fats, B. Sreenivasan, Lever Brothers

Interesterification changes the distribution of the fatty acids among the glycerides of fats or mixtures of fats from what was present originally. This affects the physical nature and behavior of fats. A discussion of this process from the standpoints of mechanism, catalysts, methods of monitoring the reaction, and applications will be discussed.



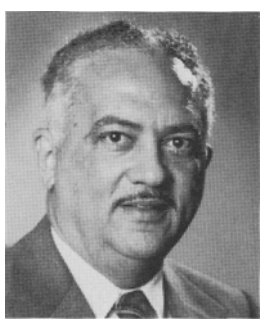
E.H. Gustafson



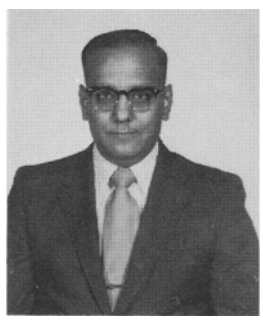
E.R. Sherwin

L.L. Richardson

F.R. Butterworth



A.M. Gavin



B. Sreenivasan