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Autore	Patterson H. B. W (Henry Basil Wilberforce)
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Nota di contenuto	Front Cover; Bleaching and Purifying Fats and Oils: Theory and Practice; Copyright Page; Table of Contents; Preface to the Second Edition; Preface to the First Edition; Acknowledgments; Chapter 1. Basic Components and Procedures; The Nature of Fats and Oils; Miscellaneous Minor Components; Pesticides, Nitrosamines, Extraction Solvents, Organo-Sulfur Compounds, and Polyaromatic Hydrocarbons; Settling; Degumming; Purifying by Reverse Osmosis; Neutralization and Washing; Clay Adsorption; Use of Carbon; Use of Silica; Chlorophyll Adsorption; Batch Bleaching; Multistage Procedures Continuous, Countercurrent, and Fixed-bed Bleaching Methods Heat Bleaching; Air Bleaching; Bleaching Effect of Light; Steam Bleaching; SAFFE Bleaching; Chemical Bleaching; Hydrobleaching; Solvent Bleaching; Chapter 2. Adsorption; Physical Adsorption and Chemisorption; Adsorption Efficiency and Variation; Conditions Affecting Adsorption; Atmospheric and Nonatmospheric Bleaching; Chapter 3. Adsorbents; Introduction; Acid Activation and Adsorption of Pigment; Commercial Bleaching Clays; Powdered Activated Carbon; Activation Procedures; Forms of Activated Carbons (Bansal et al., 1988; Norit

Speakman Carbons) Commercial Powdered Activated Carbon Products; Powdered Activated Carbon in Processing Edible Oils; Commercial Powdered Activated Carbon Companies; Activated Earth/Carbon Mixtures; Amorphous Silica Hydrogel; Commercial Amorphous Silica-Hydrogel Products; Specialty Products That Act Like Amorphous Silica Hydrogel; Chapter 4. Bleaching of Important Fats and Oils; General Principles; Lard; Beef Tallow; Butterfat; Coconut Oil; Cottonseed Oil; Grapeseed Oil; Groundnut (Arachis, Peanut) Oil; Illipe Oil, Borneo Tallow, and Other Vegetable Butters; Linseed Oil (Flax) Corn Oil (Maize) Olive Oil; Palm Oil; Palm Kernel Oil; Rapeseed Oil (Colza); Rice Bran Oil; Safflower Oil (Cartamo, Kusum); Sesame Oil (Gingili, Sim-sim, Til); Soybean Oil; Sunflower Oil (Tournesol, Girasol); Marine Oils; Hydrogenated Oils; Interesterified Oils; Castor Oil; Chapter 5. Bleachers; Batch Bleachers; Semicontinuous and Continuous Bleachers; Chapter 6. Filtration and Filters; Factors in Filtration; Filter Membranes; Paper; Textiles; Wire Gauzes (Metal Cloths); Fabric Finishing; Filter-Cloth Selection; Filter Units; Filter Economics; Polishing (Patterson, 1973) Chapter 7. Oil Recovery The Changing Situation; Filter Cake; Oil Recovery by Solvent; Oil Recovery by Hot Water in situ; Oil Recovery by Separate Aqueous Solution; Chapter 8. Safety, Security, and the Prevention of Error; Bleaching-Plant Safeguards; Chapter 9. Important Tests Relating to Bleaching; Purpose and Validity of Tests; Evaluation and Comparison of Bleaching Clays and Other Adsorbents; Fat Content of Filter Cake; Oil Bleachability; Acidity of Bleaching Clay; Particle-Size Distribution; Pore-Size Distribution; Activated Carbon-Adsorption Tests Chapter 10. The Freundlich Isotherm in Studying Adsorption in Oil Processing

Sommario/riassunto

Since the original publication of this book in 1992, the bleaching process has continued to attract the attention of researchers and the edible-oil industry. In this 2nd edition, the reader is directed to more modern techniques of analysis such as flame-atomic adsorption, graphite furnace atomic adsorption, and atomic emission spectrometry involving direct current plasma (DCP) and inductively coupled Plasma (ICP). It also discusses the Freundlich Equation and reports on high-temperature water extraction, high- temperature oxidative aqueous regeneration, and extraction with supercritical CO₂. Finally, various degumming methods improved over the past several decades are discussed.
