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Nota di contenuto	Dairy Fats and Related Products; Contents; Preface to Technical Series; Preface; Dedication; Contributors; 1 Milk Lipids - Composition, Origin and Properties; 1.1 Introduction; 1.2 Composition of milk lipids; 1.2.1 Fatty acids; 1.2.2 Triacylglycerols; 1.2.3 Mono- and diacylglycerols and free fatty acids; 1.2.4 Phospholipids; 1.2.5 Minor constituents; 1.3 Origin of milk lipids; 1.3.1 Biosynthesis and origin of the fatty acids in milk lipids; 1.3.2 De novo synthesis of fatty acids; 1.3.3 Uptake of fatty acids from the blood; 1.3.4 Desaturation of fatty acids; 1.3.5 Synthesis of triacylglycerols 1.4 Factors affecting the composition of milk lipids 1.5 Intracellular origin of milk lipid globules and the milk lipid globule membrane; 1.5.1 Secretion of milk lipid globules; 1.5.2 The milk lipid globule membrane; 1.5.3 Lipids of the milk lipid globule membrane; 1.5.4 Proteins of the milk lipid globule membrane; 1.5.5 Enzymes of the milk lipid globule membrane; 1.6 Physicochemical stability of milk lipid globules; 1.6.1 Size distribution of milk lipid globules; 1.6.2 Colloidal stability of milk

lipid globules; 1.6.3 Creaming of milk lipid globules; 1.6.4 Coalescence of milk lipid globules
 1.6.5 Homogenisation and properties of homogenised milk lipid globules
 1.6.6 Temperature-induced changes in milk lipid globules; 1.7 Crystallisation and melting of milk triacylglycerols; 1.8 Conclusions; References; 2 Milk Fat Nutrition; 2.1 Introduction; 2.2 Conjugated linoleic acid; 2.2.1 Origin of rumenic acid; 2.2.2 CLA nutrition; 2.2.3 CLA as an anticancer agent; 2.2.4 Rumenic acid and mammary tumour prevention; 2.2.5 CLA, RA and colon tumour prevention; 2.2.6 Rumenic acid and the prevention of atherosclerosis; 2.2.7 Trans fatty acids and coronary heart disease
 2.2.8 Rumenic acid and immunomodulation
 2.2.9 Rumenic acid and type 2 diabetes mellitus; 2.2.10 Rumenic acid as a growth factor; 2.3 Sphingolipids; 2.3.1 Sphingolipids in colon cancer prevention; 2.3.2 Sphingomyelin and cholesterol absorption; 2.3.3 Sphingomyelin and the immune system; 2.3.4 Sphingolipids and intestinal diseases; 2.4 Butyric acid; 2.5 Branched chain fatty acids; 2.6 Fat-soluble components; 2.6.1 The vitamins; 2.6.2 Cholesterol; 2.6.3 Other interesting components; 2.7 Further nutritional benefits; 2.8 Perceived nutritional negatives for milk
 2.8.1 Milk fat and coronary artery disease
 2.8.2 Saturated fatty acids; 2.8.3 Fat intake and cancer; 2.8.4 Dietary fat and obesity; 2.9 Conclusions; References; 3 Separation and Standardisation of the Fat Content; 3.1 Introduction; 3.2 Overview of the history of milk fat separation; 3.3 Physical models; 3.4 Standardisation of the fat content of milk; 3.5 Conclusion; References; 4 Cream and Related Products; 4.1 Introduction; 4.2 Cream processing; 4.2.1 Separation; 4.2.2 Standardisation; 4.2.3 Heat treatment; 4.2.4 Homogenisation; 4.2.5 Quality of cream; 4.3 Whipping cream
 4.3.1 Production of whipping cream

Sommario/riassunto

Whilst milk fat has always been appreciated for its flavour, the market had suffered from concerns over cardiovascular diseases associated with the consumption of animal fats. However, recent clinical studies have indicated benefits, particularly in relation to conjugated linoleic acids (CLA), in the prevention of certain diseases. The range of spreads has also increased, including the addition of probiotic organisms and/or plant extracts to reduce serum cholesterol levels. The primary aim of this publication is to detail the state-of-the-art manufacturing methods for: Cream