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Negative staining transmission electron microscopy; 2.4.3 Low-temperature transmission electron microscopy; Freeze-fracture replication; Low-temperature preparation methods; Freeze-substitution for transmission electron microscopy; Cryo-transmission electron microscopy; 2.4.4 Energy-filtering transmission electron microscopy techniques; Global imaging; Contrast enhancement; Thick section imaging; Frozen hydrated specimens; Electron spectroscopic imaging; 2.5 X-ray microanalysis; 2.6 Rheology; 2.7 Light scattering
2.7.1 Laser light scattering 2.7.2 Dynamic light scattering; 2.8 Nuclear magnetic resonance spectroscopy; 2.9 Digital imaging and image analysis; 2.9.1 Hardware; 2.9.2 Software; 2.9.3 Major steps in applying image analysis; Image acquisition; Calibration; Image enhancement; 2.10 Laboratory safety; 2.10.1 Light microscopy; 2.10.2 Scanning electron microscopy/transmission electron microscopy; 2.10.3 Systems using lasers; 2.11 Future techniques in dairy product structure; 2.11.1 Scanning probe microscopy; 2.11.2 Diffusing wave and ultrasonic spectroscopy; 2.11.3 Microwave techniques in microscopy
References
3 Microstructure of Milk Components; 3.1 Introduction; 3.2 Cow's milk composition; 3.2.1 Milk fat globule; Milk fat; Milk fat globule membrane; 3.2.2 Colloidal milk proteins; Microstructure of casein micelles; Molecular structure of casein micelles; Interactions and stabilisation of casein micelles; 3.2.3 Whey proteins; 3.2.4 Lactose; 3.3 Concluding remarks; References; 4 Microstructure of Dairy Fat Products; 4.1 Introduction; 4.2 Microstructure of cream and butter; 4.2.1 Background; 4.2.2 Cream; 4.2.3 Whipped cream; 4.2.4 Butter; 4.3 Milk fat; 4.3.1 Composition; 4.3.2 Fractionation
4.4 Microstructure

Sommario/riassunto

Structure of Dairy Products
SOCIETY OF DAIRY TECHNOLOGY
SERIESE
Edited by A. Y. Tamime
The Society of Dairy Technology (SDT) has joined with Blackwell Publishing to produce a series of technical dairy-related handbooks providing an invaluable resource for all those involved in the dairy industry; from practitioners to technologists working in both traditional and modern large-scale dairy operations. The previous 30 years have witnessed great interest in the microstructure of dairy products, which has a vital bearing on, e.g. texture, sensory qualities, shelf life and packaging
