# Food Emulsions

## Fourth Edition, Revised and Expanded


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# Preface to the Fourth Edition

*Food Emulsions* has now reached its fourth edition and very much reflects the strength of the original publication. Like the previous editions, this book realizes the value of the long tradition of diversity and excellence of research and development within the food emulsion industry. This is exemplified by Chapter 12 on beverage emulsions (Tan), by Chapter 2 on food emulsifiers (Krog and Sparsø); by Chapter 4 on proteins and polar lipids (Nylander); by Chapter 1 on food emulsions in general (Dalgleish), and by Chapter 13 on dressings and sauces (Ford et al.).

There is probably no other emulsion category for which components have more influence on the properties of crystalline and liquid crystalline structures, than lipids—Chapter 3 by Larsson on lipid structures is essential reading.

The first edition of the book introduced advanced chapters on the fundamentals of food emulsion properties, and this aspect is a conspicuous feature of the present book with Chapter 5 on destablilizing mechanisms, Chapter 6 on emulsion stablility, Chapter 9 on orthokinetic stability, Chapter 8 on coalescence mechanism, and Chapter 10 on the characteristics of double emulsions.

Finally, this edition shows strength in an area not represented as strongly earlier: namely, the different methods of characterization and analysis of emulsions. Chapter 14 on droplet analysis by Coupland and McClements, Chapter 7 on surface forces in emulsions by Claesson et al., Chapter 11 on rheology of emulsions by Princen, and Chapter 15 on NMR in food emulsions by Balinov et al. give excellent overviews of these methods.

Needless to say, this book exceeds the quality of its predessors, and we take this opportunity to recognize the truly outstanding efforts of our colleagues.

*Stig E. Friberg*
*Kåre Larsson*
*Johan Sjöblom*

# Preface to the Third Edition

The economic and social changes during the last decades have changed the formulation requirements for emulsion systems in the most drastic manner.

Total cost analysis means that the selection of ingredients is no longer just a question of cost per pound, but the efforts to stabilize the system must now be complemented by ''hidden'' costs for long-term technical or commercial failures—sometimes related only indirectly to stability. Social pressure has meant that new components with little or no nutritional value and with intermolecular interactions different from traditional components must be accomodated, leading to phenomena for which the earlier methods provide no appropriate response.

Taken in total, the consequences of change are that compled food emulsion systems must be analyzed with proper attention to the colloidal structures involved. Hence, the effects of the specific properties and interactions of polymers and proteins included in this book and the association structures of lipids leading to the formation of vesicles have received the attention they merit.

*Stig E. Friberg*
*Kåre Larsson*

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