DESCRIPTION

The Comprehensive, Single-Source Reference on Multiple Emulsions

In theory, multiple emulsions have significant potential for breakthrough applications in food, agricultural, pharmaceutical, nutraceutical, and cosmetic industries in which they can facilitate the sustained release and transport of active material. However, in practice, multiple emulsions are thermodynamically unstable. This book presents recent findings that can help formulators understand how to enhance their stability. With chapters contributed by leading experts from around the world, it covers the definition and properties of multiple emulsions, their formation and stability, and potential applications, with an emphasis on medical and pharmaceutical applications. In one definitive resource, it presents recent findings and achievements in the field, including:

- New theoretical approaches and modeling to characterize the transport mechanism
- Droplet size reduction and increased shelf life stability through the use of polymeric amphiphiles and complex adducts
- The use of new emulsification techniques to enhance the monodispersibility of the droplets
- Potential applications in drug delivery systems where clinical studies have proven their efficacy

This is a core, hands-on reference for surface and colloid scientists, physical chemists, chemical engineers, soft materials scientists, food chemists, controlled release scientists, and pharmaceutical scientists in drug delivery applications, as well as for graduate
students in these disciplines. The editor and contributors hope this logical consolidation of current information will further the understanding of multiple emulsions and lead to new, practical applications.

ABOUT THE AUTHOR

Abraham Aserin, PhD, is a researcher at the Casali Institute of Applied Chemistry at the Hebrew University of Jerusalem, Israel. His research is focused on many practical facets of surfactant chemistry, such as emulsions, microemulsions, lyotropic liquid crystals, dispersions, and improvement of drug bioavailability. Dr. Aserin received BSc and MSc degrees from the Hebrew University of Jerusalem, Israel, in 1978 and 1981, respectively. He earned his PhD in surfactant chemistry there in 1987 under the supervision of Professor Nissim Garti.

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