

1. Record Nr.	UNINA9910729895603321
Autore	Figura Ludger O.
Titolo	Food Physics : Physical Properties - Measurement and Applications / / by Ludger O. Figura, Arthur A. Teixeira
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2023
ISBN	3-031-27398-2
Edizione	[2nd ed. 2023.]
Descrizione fisica	1 online resource (639 pages)
Disciplina	910.5 664.00153
Soggetti	Food science Physical chemistry Industrial engineering Production engineering Biophysics Food Science Physical Chemistry Industrial and Production Engineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Chapter 1: Water Activity -- Chapter 2: Mass and Density -- Chapter 3: Disperse Systems -- Chapter 4: Rheology -- Chapter 5: Texture -- Chapter 6: Interfaces -- Chapter 7: Permeability -- Chapter 8: Thermal Properties -- Chapter 9: Electrical Properties -- Chapter 10: Magnetic Properties -- Chapter 11: Electromagnetic Properties -- Chapter 12: Optical Properties -- Chapter 13: UV and X-rays -- Chapter 14: Radioactivity -- Chapter 15: Acoustic Properties -- Chapter 16: Online Sensors.
Sommario/riassunto	This textbook provides a comprehensive foundation of food physics by addressing the physical properties of food, food ingredients, and their measurements. Physical properties of food play a key role in all fields where modern technological processes are applied for the generation of food raw materials and the production of food. The determination of the physical properties of food and related products is a pre-requisite

for product and process development, production engineering and automation in today's food, pharmaceutical and cosmetics industries, as well as related quality control activities. Following the success of its first edition published in 2007, the book has been updated to reflect recent industrial applications of novel physical food processing technologies. Each chapter begins with basic principles and progresses to a comprehensive coverage of the topic. The authors enriched this second edition with several didactic elements, including definition boxes, examples, and chapter-end summaries. This textbook helps readers to build up their knowledge of the important aspects surrounding the physical properties of foods and food ingredients. It is also an essential resource for students of food science and technology to complement textbooks in food chemistry and food microbiology, as well as for food and chemical engineers, technologists, and technicians in the food industry. .
