

Superheated Steam Drying: A Smart and Sustainable Approach to Food Preservation

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Superheated steam (SHS) drying has emerged as a transformative technique in food processing and fulfills the need for technologies that reduce environmental impact while preserving the quality, safety, and nutritional value of food. Superheated steam drying is oxygen-free, energy efficient, minimizes oxidative degradation and enhances product quality. This book is a comprehensive exploration of SHS drying technology, highlighting its scientific principles, engineering components, and broad applications across food and biological materials. It bridges the gap between theory and practice.

Inside this book, you will also find:

- In-depth explanations and visual aids along with numerous explanatory figures accompany detailed discussions on key concepts, making complex ideas accessible and understandable.
- The standard and advanced protective measures, thorough risk assessment methodologies to ensure the safety and reliability of SHS drying systems.

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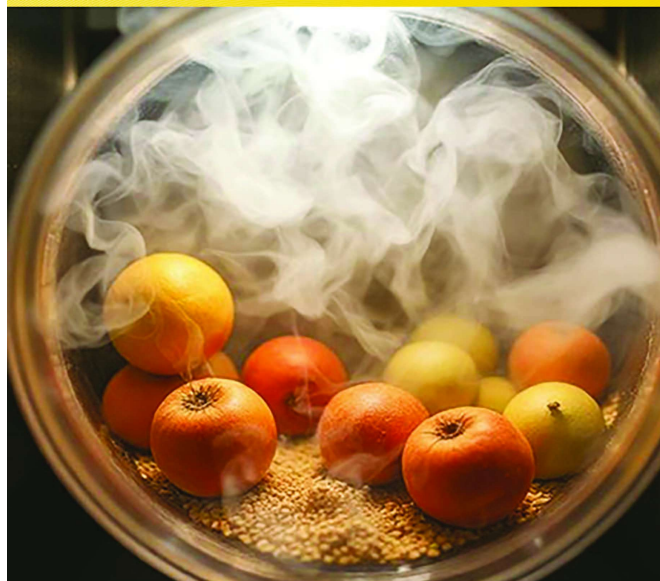
- Introduction to Superheated Steam Drying Technology
- Principles of Superheated Steam Drying
- Elements of Superheated Steam Drying Technology
- Application of Superheated Steam Drying (SSD) Technology
- Hybrid Drying Technologies: Integration of Superheated Steam (SHS) with Microwave, Infrared, and Vacuum Systems
- Automation, IoT, and Smart Control in SHS Drying
- Policy Framework, Institutional Support, and Future Perspectives for Sustainable SHS Drying

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Superheated steam (SHS) drying, advantages of SHS, hybrid drying systems, smart control systems, Industry 4.0 goals, high energy consumption, energy conservation and sustainability, recovery and reuse of latent heat, waste heat recovery systems, reduction in specific energy consumption, carbon footprint reduction



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