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Freeze Drying of Pharmaceutical Products

Edited by
Davide Fissore, Roberto Pisano, and
Antonello Barresi



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Davide Fissore is Professor of Chemical Engineering at Politecnico di Torino (Italy). His research activity is mainly focused on process modelling and optimisation, and on the design and validation of model-based tools for process monitoring and control. One of the topics of his research activity is the freeze-drying of pharmaceutical products and foodstuffs. He developed various devices to monitor and optimise the in-line (using a control system) or off-line (using the design space of the product) freeze-drying process for a given product. He acted as a consultant for several pharmaceutical companies, focusing on process development and scale up. Davide Fissore is author or co-author of 90 papers appeared in international peer-reviewed journals and 15 book chapters, and he currently holds 9 patents, issued or pending.

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Antonello Barresi is currently full Professor of Transport Phenomena at Politecnico di Torino (Italy), in charge of the course on Process Development and Design. Currently he serves as Italian national delegate to the Working Party on Drying for the European Federation of Chemical Engineers. His main research interests in drying include drying and freeze-drying of pharmaceuticals and enzymes, modelling and optimization of freeze-drying processes, and control of industrial freeze-dryers. Most recent research is focused on process transfer, scale-up and cycle development, and new approaches for process development and quality control in freeze-drying of pharmaceutical and food products. He is the author of more than 250 papers (of which about 160 are published in international journals or books) and more than 100 conference presentations.



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