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Perspective on Hot-melt Extrusion Process -- Melt Extrusion: A Commercial Perception to Practicality -- Future Trends.

Sommario/riassunto

This inclusive text describes hot melt extrusion for pharmaceutical applications, focusing on the materials used for the preparation of solid dispersions, fundamentals for preparing such systems and novel applications using extrusion technology. Highlighting viewpoints from the academic, excipient, equipment, product development and regulatory communities, this comprehensive text compiles input from industry thought leaders to illustrate strategies and technologies for applying hot melt extrusion for drug product development while also providing insight into the path forward for the technology in years to come. Dr. Michael A. Repka is Chair and Professor of the Department of Pharmaceutics at The University of Mississippi, as well as Director of the Pii Center for Pharmaceutical Technology. His research interests include the solubilization and delivery of poorly soluble bioactives via hot melt extrusion technology. Dr. Repka has established himself as an expert in this major pharmaceutical processing field through his numerous peer-reviewed publications, presentations and scientific talks. Dr. Nigel Langley is currently Head of Marketing and Technical Sales at BASF Corporation where he is responsible for the promotion and technical support for BASF’s pharmaceutical excipients and APIs to the Pharmaceutical Industry in North America. He has a strong interest in solubilization including hot melt extrusion. He received his Ph.D. in Liquid Crystals from Hull University, U.K., and an M.B.A. from Leeds University, U.K. Prior to joining BASF, he worked for Croda International in the U.K., Japan and the United States. Dr. James DiNunzio is currently an Associate Principal Scientist at Merck & Co., Inc. where he serves as a member of the Hot Melt Extrusion Technology Development Team. He received his Ph.D. in Pharmacy from the University of Texas at Austin and holds M.S. and B.S. degrees inChemical Engineering from Columbia University and SUNY Buffalo, respectively. His research interests include formulation design of amorphous dispersions, development of controlled release products using melt extrusion, continuous manufacturing and engineering of directly shaped drug products.