KEYNOTE FORUM | **DAY 2** *JOURNAL OF NANOMEDICINE & NANOTECHNOLOGY 2019, VOLUME 10 | DOI: 10.4172/2157-7439-C1-099*

Hot melt extrusion: An emerging drug delivery technology of the 21st century

Hot melt extrusion (HME) is emerging technology which is gaining high importance in the pharmaceutical industry as a novel technique for the preparation of various dosage forms and drug delivery systems, for example, granules and sustained-release tablets. It is a fast-growing technology platform that is utilized to solve difficult formulation challenges, primarily in the area of solubilization. Due to fast processing, a high degree of automation, the absence of solvents, simple and continuous operation and ability to process poorly compactable material into tablet form are some of the main advantages offered over conventional processing by this emerging technique. Applications of HME in the pharmaceutical industry continues to grow and the recent success of this technique has made it a useful tool of consideration as a drug delivery solution. The use of hot-melt extrusion (HME) within the pharmaceutical industry is steadily increasing, due to its proven ability to efficiently manufacture novel products. HME involves the application of heat, pressure, and agitation through an extrusion channel to mix materials together, and subsequently forcing them out through a die. Twin-screw extruders are most popular in solid dosage form development as it imparts both dispersive and distributive mixing. It blends materials while also imparting high shear to break-up particles and disperse them. HME extrusion has been shown to molecularly disperse poorly soluble drugs in a polymer carrier, increasing dissolution rates and bioavailability.

Rashid Mahmood
Surge Laboratories Private Limited, Pakistan

Biography

Rashid Mahmood has a master degree in Analytical Chemistry and an MS in Total Quality Management. He has 15 years of experience of Pharmaceutical Quality Operations and has participated in many international conferences as a keynote speaker. He has presented various talks in USA & China on Cleaning Validation, cGMP Guidelines, Quality Risk Management, Role of Mass Spectrometry in Pharmaceuticals and on new Drug Delivery Systems. Currently, he is working as a Senior Executive Manager Quality Operations for Surge Lab. (Manufacturer of Microencapsulated APIs, Liquid & Dry Powder Parentrals) which is the best export-oriented company of Pakistan.

rashid.mahmood@surgelaboratories.com