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Suitability of plasticised polymers for hot melt extrusion process ethyl alcohol as desolvating agent

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Polymer for hot melt extrusion must exhibit thermoplastic characteristics in order to permit melt extrusion process and they must be stable at processing temperature. Other important characteristics are: suitable glass transition (Tg) of 50-180°C, low Hygroscopicity and no toxicity since large amount of polymers are used. Extrudability of polymer is mainly determined by glass transition temperature and melt viscosity. Polymers having high molecular weight can hardly be extruded due to their high melt viscosity. Moreover, a high Tg required high processing temperature which can degrade sensitive drug. As a general rule, an extrusion should be run at temperature 20-40°C above the Tg. Most polymers exhibit thixotropic behaviour which means that the viscosity declines as function of increasing shear stress. So the study is designed to determine the influence of several plasticizers on the Tg and melt viscosity of polymer

Biography

Amol M. Sabale, doing M.Pharm (Pharmaceutics) in Tatyasaheb Kore College of Pharmacy, Warananagar, Shivaji University, Kolhapur. Qualified GPAT and entrance examination for NIPER in 2011. Presented posters in various national and international conferences.

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Modelling and comparison of dissolution profiles of matrix tablet

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Over recent years, drug release from solid pharmaceutical dosage forms has been the subject of intense and profitable scientific developments. Whenever a new solid dosage form is developed or produced, it is necessary to ensure that drug dissolution occurs in an appropriate manner. The pharmaceutical industry and the registration authorities do focus, nowadays, on drug dissolution studies. The quantitative analysis of the values obtained in dissolution / release tests is easier when mathematical formulas that express the dissolution results as a function of some of the dosage forms characteristics are used. In some cases, these mathematic models are derived from the theoretical analysis of the occurring process. In most of the cases the theoretical concept does not exist and some empirical equations have proved to be more appropriate. Drug dissolution from solid dosage forms has been described by kinetic models in which the dissolved amount of drug (Q) is a function of the test time, t or Q5 f (t). Some analytical definitions of the Q (t) function are commonly used, such as zero order, first order, Hixson–Crowell, Weibull, Higuchi, Korsmeyer–Peppas and Hopfenberg models. Other release parameters, such as dissolution time (t), dissolution efficacy (ED), difference factor (f1), similarity factor (f2) can be used to characterize drug dissolution / release profiles.

Biography

Amol M. Sabale, doing M.Pharm (Pharmaceutics) in Shivaji University, Kolhapur. Presented posters in various national and international conferences.

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