

From the Editor's Desk

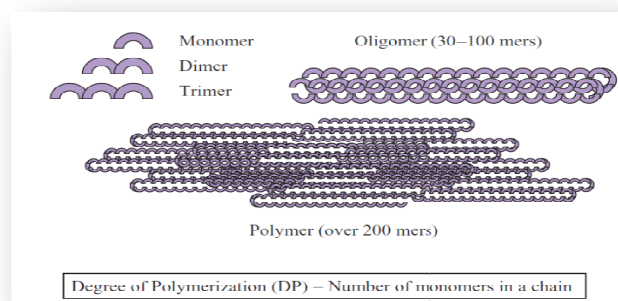
Polymers: Multidimensional Aspects

Sharma Vimukta

Our editor from, Principal, B. M. College of Pharmaceutical Education and Research, Indore, INDIA

Synthetic and natural-based polymers have found their way into the pharmaceutical and biomedical industries and their applications are growing at a fast pace. Understanding the role of polymers as ingredients in drug products is important for a pharmacist or chemist who deals with drug products on a routine basis. Having a basic understanding of polymers will give you the opportunity to not only familiarize yourself with the function of drug products but also possibly develop new formulations or better delivery systems. This review will provide the basis for understanding pharmaceutical polymers. The basic concepts of polymer chemistry, polymer properties, types of polymer, polymers in pharmaceutical and biomedical industries and reviews of some polymeric products in novel drug delivery systems. Polymers have a wide- ranging impact on modern society. Polymers are more commonly referred to as “plastic”.

In oral delivery, polymers are used as coatings, binders, taste makers, protective agents, drug carriers and release controlling agents. Targeted delivery to the lower part of the gastrointestinal tract (e.g., in the colon) was made possible by using polymers that protect drugs during their passage through the harsh environment of the stomach. Transdermal patches use polymers as backings, adhesives or drug carriers in matrix or membrane products. Controlled delivery of proteins and peptides has been made possible using biodegradable polymers. In many drug products you may find at least one polymer that enhances product performance. Polymeric nanoparticles consist of the drug dispersed in an amorphous form within a polymer matrix. Such particles could be prepared as nanospheres, wherein the drug is dispersed uniformly throughout the matrix of the particle (typically as a solid solution in polymer), or as nanocapsules, wherein the drug is present in the core of the particle. Thus – polymers are playing an important role in 15 day as well as moving into drug industry.



Email: drvimuktasharma@gmail.com