

Review on micro-encapsulation with chitosan for pharmaceuticals applications

ABSTRACT

There is evidence that several systematic researches recognized the importance of using polymers in drugs manufacturing. Natural polymers are usually biocompatible, biodegradable and non-expensive like chitosan. Chitosan is one of the natural biodegradable groups of polymers that have been extensively used for microencapsulation of drugs like isoniazid, propranolol and aspirin. This natural polysaccharide has many pharmaceuticals applications, such as oral and parenteral delivery of drugs. It is important for a wide range of scientific and industrial processes to know the applications of chitosan microparticles loaded drugs in pharmaceuticals fields. Recently, this issue was the objective of many research papers in the literature. Chitosan can also be combined with other polymer to encapsulate many drugs in order to achieve targets with performance delivery. Recent advances in microencapsulation methods have facilitated investigation of chitosan usage to load drugs. This review about the preparation of chitosan-based-micro and particles by many fabrications methods of pharmaceutical applications including coacervation, drying techniques, ionic cross-linking, ionotropic gelation and emulsion solvent diffusion method.

Keyword: Polymer; Emulsion; Chitosan; Drug delivery systems; Ionotropic gelation