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Gelatin Nano Particles Uses

Hideharu Shintani

Editor-in-Chief of Chemical Sciences Journal, and Professor in Department of Medical Devices, Chuo University, Japan

Editorial Note

Gelatin is a flavorless solid substance along with translucent colorless and brittle than present in dry form. Gelatin (mixture of peptide) is produced by hydrolysis of collagen and is an important part of extracellular matrix and provides mechanical protection to the tissues. Collagen is extracted from the different parts of animal such as skin, bones and connective tissues and also is extracted from different animals like cattle, chicken, pigs and fishes. Collagen is a triple helix molecule comprised of three Alpha helix of glycine and X-Y in which X and Y is mostly Proline and hydroxyproline, respectively. Collagen is rapidly used in cosmetics, pharmaceuticals, tissues engineering construction and most mostly used in dressing system. Gelatin which is obtained from hydrolysis is of two types, type of gelatin 'a' and type of gelatin 'b' with isoelectric point 7 to 9 and 4 to 5 respectively is obtained from acid pretreatment and basic pretreatment. Gelatin nanoparticles are important in biomedical field that instigate the development of new nanoparticles of different synthetic Polymers like that poly ethylene glycol, poly glycolic acid, poly lactic acid, poly alkyl cyanoacrylate and natural polymers (a chitosan, gelatin and dextran) are used for the development of nanoparticles for biological application and drug delivery system. Among all, gelatin nanoparticles are mostly used because of inexpensive, non-toxic, bioactive and biodegradable properties. In gelatin, type-B shows good potential for drug delivery as compared to the gelatin type A. Gelatin based material must be cross linked with glutaraldehyde.

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***Address for Correspondence:** Hideharu Shintani, Editor-in-Chief of Chemical Sciences Journal, and Professor in Department of Medical Devices, Chuo University, Japan, E-mail: shintani@mail.hinocatv.ne.jp*

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