

Preparation and characterization of biodegradable collagen/ poly(L-lactide) composite biomaterial

이정수, 장윤희*
인하대학교 화학공학과
(yhchang@inha.ac.kr*)

Collagen, one of the most common biomaterials, has been studied diverse application in biomedical field such as wound dressing, drug and gene carrier, and tissue engineering because of its excellent biocompatibility and biodegradability. The collagen bio-products are used in a various type products such as film, hydrogel, sponge, or scaffold forms. The mechanical properties of collagen fiber such as thermal stability, elasticity are needed to make medical care products, wound dressing. So, surface modification of collagen is used to improve the properties by many biodegradable polymers. In study, collagen composite material are made by grafting and blending method, using poly (L-lactide)(PLLA) and it is investigated the change of the surface properties of the collagen composite material. The collagen composite materials were characterized by fourier transform infrared analysis (FTIR), wide-angle X-ray diffraction (WAXD) and the swelling ratio and tensile strength, static contact angles were measured, too.