

Changes in the structural and physiological properties of fibroin by gamma ray irradiation

최종일*, 성낙윤, 김재훈, 송범석, 이주운
한국원자력연구원
(choiji@kaeri.re.kr*)

This study was conducted to examine the changes in the molecular structure and physiological activities of fibroin by a gamma irradiation. The measurements of the molecular weight distribution of fibroin have shown that as the radiation dose was increased, the molecular weight of the fibroin was increased. The secondary structure analysis of fibroin by circular dichroism revealed that the contents of α -helix, β -turn, and random coil were changed by the irradiation. The 2,2-diphenyl-1-picryl-hydrazil radical scavenging activity of irradiated fibroin were higher than the non-irradiated one.