

The observation of silk fibroin film including various additives

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Abstract

The silk fibroin film is known to have biological compatibility, stability to most solvents and specific structural and functional characteristics⁽¹⁾. So, the silk fibroin film has been recently stimulated by the increasing demand of new materials with selected functionalities for application in the biotechnological and biomedical fields⁽²⁾. Its characteristics, such as secondary structure, tensile strength and softness can be modified by various additives⁽³⁾.

In this study, silk fibroin films including glycerol, xylitol, sodium chloride and polystyrene bead were cast on the polystyrene plates at room temperature. The surface of films was observed by FE-SEM(S-4300, HITACHI). When examined by the naked eye, films showed a remarkable difference in softness and transparency. And also the microscopic structure of fibroin film showed a unique pattern according to the property of additives.

References

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