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Enhanced mechanical strength and sustained drug release of gelatin/keratin scaffolds

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Abstract

Three dimensional natural polymer composites with highly interconnected pores of gelatin/keratin (GK) and gelatin/silk (GS) prepared by freeze-drying technique. FTIR analysis confirmed the functional group of GS and GK. GK possesses superior mechanical strength and sustained release of drug. Both GK and GS are hemocompatible in nature. Hence, in comparison with GS, GK is a potential candidate for sustained drug release and could be availed as a natural bandage material. Therefore, GK is a green, non-toxic material to be employed in biomedical field.

Keywords: Biomaterials; Keratin; Polymers; Surface; Composite materials; Mechanical; Drug delivery.

1. Introduction

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