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Characterization and Analysis of Polymers Used as Artificial Skin

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Abstract

Skin acts similar to a wall, which safeguards human body from infections. Skin, is very important for human being to survive on earth. Many times a severe damage occurs on the skin because of any accidents, the body takes more time to replace it. In other cases it becomes difficult to transplant. Transforming from donors will also lead to infections. These conjugations can be overcome by using artificial skin. The selected polymer for artificial skin is expected to be bio-compatible and it should not cause inflammation or rejection. At present artificial skins are manufactured / developed by using cells from infants, and using materials like Silicone polymer, polyesters, polylactic acid and their copolymers, and other conventional material, which are heavier in density, porosity and costly. It make skin graft which does not move air pockets capably, dehydration and expansion of shrinkage stresses, buckling of graft, rupture of graft wound bed bond and also poor citizens may not be able to bear the cost of the implants.

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1. Introduction

In daily life polymer materials plays vital role, different polymers find a lot of application depending on their physical, chemical and structural properties. Polymers are also used in implant as artificial skin for deceased; these polymers are mostly based on silicone, PTFE, Polyurethane. Stern et al., [4] successfully studied and implanted the artificial skin made of synthetic polysiloxane polymer (Silastic), these polymers can also with stand chemical attacks

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