

ABSTRACT

PET (Polyethylene terephthalate) is a biocompatible material. Although silicon oxide (SiO_x) is not proper for using it in biomedical science due to toxicity. According to a recently published paper [29] the use of SiO_x coating on materials that were not suitable for cell adhesion and proliferation, induced the fibroblasts adhesion on that materials. In order to clarify if SiO_x coating is cytotoxic or not, we studied PET/SiO_x(x=1.6) thin films that were incubated with human skin fibroblasts. The toxicity of the material and the morphological changes on the cells structures were examined with MTT assay, optical microscopy and with Scanning Electron Microscopy(SEM). The conclusion from the experiments was that the SiO_x did not inhibit the fibroblasts proliferation around it, but the surface was not suitable for cell adhesion.