

ADSORPTION OF ALBUMIN ON SILICONE AND NATURAL RUBBER TUBES GRAFTED WITH ACRYLAMIDE BY GAMA IRRADIATION.

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Tubular prostheses and related devices includes drains, catheters, and shunts, and these are always made from polymeric materials such as natural rubber, silicone rubber, polytetrafluoroethylene, etc.. Radiation grafting of acrylamide on those polymers can improve the biocompatible properties. The antithrombogenic tendency of a material can be predicted by albumin adsorption on the surface and also by its hydrophilicity. For this work was utilized silicone rubber (SR) and natural rubber (NR) tubes of 2 cm length, i-diameter 3 mm and o-diameter 5 mm. Tubes grafted with acrylamide were obtained by gama ray irradiation. The graft yield for SR tubes varied from 2% to 21% and for NR tubes, from 3% to 17%. The hydrophilicity of both materials increased linearly with the grafting degree. The adsorption of albumin- ^{125}I in the tubes was measured under flow conditions using a flux of 4 ml/min during 2 hr. The adsorption of BSA for SR tubes increased with the grafting degree while that for NR tubes carried constant.

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