

**USE OF GAMMA IRRADIATION AND ELECTRON BEAM ON  
POLYURETHANE CATHETERS COATED WITH SILVER  
NANOPARTICLES**

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The purpose of this work was to study the use of gamma irradiation and electron beam for coating of silver nanoparticles in polyurethane catheters, for antimicrobial activity. Silver nanoparticles have been used in the medical area due their remarkable antimicrobial properties. Titanium dioxide nanoparticles obtained by the sol-gel method were used as coating of catheters for subsequent impregnation of silver nanoparticles with gamma irradiation and electron beam with 25 and 50kGy dose. The Raman spectrometry was used to identify the polymorph of titanium oxide, rutile. The amounts of titanium and silver presents in the coated catheters had been evaluated by Inductively Coupled Plasma – Optical Emission Spectrometry (ICP OES).