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Activation foil measuring on accelerator based neutron source

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Epithermal neutron source based on a tandem accelerator with vacuum insulation and lithium target has been proposed, developed and operated in Budker Institute of Nuclear Physics. Generation of neutrons is the result of a 7Li (p, n) 7Be reaction at a proton energy of 2 MeV. At a proton current of 5 mA, the neutron flux density at the output is 5 10^8neutrons per cm^2 per second. To control the flux density and the neutron spectrum set of activation foils SWX-531(Shieldwerx) and set of self-made foil from indium is used. To measure the activity of foils, an HPGe detector is used. The report presents and discusses the results of measurements of the activation of foils during *in vitro* and *in vivo* studies.

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