

THE STUDY OF NUCLEAR REACTIONS FOR PRODUCTION OF ISOTOPES FOR MEDICAL RADIOACTIVE ARSENIC BY USING DIFFERENT CROSS SECTIONS

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ABSTRACT

This presented study is to make comparison of cross sections to produce ^{71}As , ^{72}As , ^{73}As and ^{74}As via different reactions with particle incident energy up to 60 MeV of alpha 100 MeV of proton as a part of systematic studies on particle-induced activations on enriched Ge, Ga, Rb and Nb targets and neutron capture. Theoretical calculation of production yield, and suggestion of optimum reaction to produce ^{71}As , ^{72}As , ^{73}As and ^{74}As , based on the main published and approved experimental results of excitation functions were calculated.

KEYWORDS: ^{71}As , ^{72}As , ^{74}As , Excitation Functions, Longer Lived PET Isotope, Accelerator Isotope Production, Half-Life, Radiopharmaceuticals