



Abstract

The charged particle induced nuclear reactions on various targets ^{87}Rb , ^{88}Sr , ^{89}Y , ^{92}Zr , $^{\text{nat}}\text{Zr}$ and ^{93}Nb were considered to investigate the production of ^{90}Y . ^{90}Y is a therapeutic radionuclide, and one of the most important recipes for theranostic pair $^{86}\text{Y}/^{90}\text{Y}$. The experimental results of available literature data were compared with the evaluated theoretical predictions by means of nuclear model codes ALICE-IPPE, EMPIRE 3.2.2 and TALYS 1.9 and optimum conditions for the production are predicted. The evaluated excitation functions find importance in various practical applications including nuclear medicine and improvement of nuclear model calculations.