



**PRODUCTION YIELDS OF YTTERBIUM -169 MEDICALLY RELEVANT  
RADIONUCLIDE WITHIN MEDIUM ENERGY RANGE FOR THE PROTONS,  
DEUTERONS ANDp ALPHA PARTICLES**

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**ABSTRACT**

Ytterbium 169 radioactive source emits 52 keV a characteristic  $\gamma$ -rays and x- rays with energies of various 65 to 310 keV which has found more applications in medical of brachytherapy applications. Among the possible methods for cyclotron production of Ytterbium 169 we investigate the proton, deuteron irradiation on Thulium-169, and alpha particles irradiation on natural Erbium (<sup>nat</sup>Er). The total isotopes production yield based on the main published and approved experimental results of excitation functions were calculated.

**KEYWORDS:** Excitation Function, Isotopes Production Yield of Ytterbium-169, Nuclear Medically Relevant