



Contribution ID: 118

Type: Poster

Validation of neutron induced data up to 18 MeV for production of the therapeutic radionuclide ^{67}Cu

Wednesday, 19 September 2012 18:00 (1h 50m)

The radionuclide ^{67}Cu can be produced via several routes. Initially the $^{67}\text{Zn}(n,p)^{67}\text{Cu}$ reaction was applied using a nuclear reactor. In a recent CRP of IAEA, the study of production of this radionuclide is in progress via the $^{67}\text{Zn}(n,p)^{67}\text{Cu}$, $^{68}\text{Zn}(p,2p)^{67}\text{Cu}$ and $^{70}\text{Zn}(p,\alpha)^{67}\text{Cu}$ reaction. In this work we have validated the neutron induced data for the production of ^{67}Cu . The validation is based on integral test of the recommended data that were deduced from calculations done by using nuclear model codes STAPRE, EMPIRE, TALYS and ALICE-IPPE as well as by the statistical approach of fitting the experimental data.

Keywords: Radionuclides, Nuclear model calculations, Validation, Integral tests.

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Session Classification: Poster Session

Track Classification: Nuclear Chemistry, Radionuclide Production, High-Power Targetry