

Neutron Total and Capture Cross Sections on Mo-95, Tc-99, Ru-101 and Rh-103

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Abstract

The neutron induced nuclear data for Mo-95, Tc-99, Ru-101 and Rh-103 was calculated and evaluated from 10 keV to 20 MeV. The energy dependent optical model potential parameters were extracted based on the recent experimental data. Spherical optical model, statistical model in equilibrium energy, multistep direct and multistep compound model in pre-equilibrium energy and direct capture model were introduced in Empire calculation. The calculated results were compared with the evaluated files. The model calculated total and capture cross sections were in good agreement with the reference experimental data. The evaluated cross sections were compiled to ENDF-6 format and will improve the ENDF/B-VI.