INDEPENDENT FISSION YIELD MEASUREMENTS WITH JYFLTRAP

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A novel technique has been developed at the Accelerator Laboratory of the University of Jyväskylä to determine the independent isotopic fission product yields [1]. It combines the chemical universality of the ion guide method with the unique properties of a Penning trap. The former allows producing ions from the isotopes of all elements. The latter provides unambiguous identification of the isotopes. The mass resolving power in this experiment was about 10^5 with the excitation time 400 ms. Such a high mass resolving power was sufficient to distinguish individual nuclides. In some cases it was even possible to separate isomeric and ground states. The yields are based on the ion counting rates after the mass separation.

In the report a brief description of the experimental method will be given. Experimental data on proton-induced fission of ^{232}Th at 25 MeV primary beam energy will be presented in comparison with theoretical calculations [2].

1. H.Penttilä *et al*. // Eur. Phys. J. A. 2012. V.48. P.43.
2. V.A.Rubchenya, J.Äystö // Eur. Phys. J. A. 2012. V.48. P.44.