

**Mo-99 2015 TOPICAL MEETING ON  
MOLYBDENUM-99 TECHNOLOGICAL DEVELOPMENT**

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**MARIA Research Reactor in Supply Chain of Mo-99**

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**ABSTRACT**

The high flux research reactor MARIA is operated at the National Centre for Nuclear Research. Due to supply shortages of molybdenum-99 during July 2009 – February 2010 there was developed the Mo-99 irradiation and transport technology in MARIA reactor facility and then its expedition to the processing facility in Petten (Holland). From February 2010 till the end of 2014 were irradiated 1112 uranium plates. Especially important was MARIA reactor operation from the mid of December 2012 till the end of April 2013 when the quantity of delivered for market Mo-99 covered about 15% of global demand. After upgrading of the primary fuel channel cooling system we are available to install an additional channel for U-targets irradiation (increased capacity around 50%). Under collaboration with Mallinckrodt Pharmaceuticals and with reactors HFR and BR-2 we are developing irradiation and transport technology of a new designed LEU targets for molybdenum production.