

NUCLEAR REACTORS AND PRODUCTION OF MEDICAL RADIOISOTOPES: CASE OF THE TUNISIAN SUBCRITICAL ASSEMBLY

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Nuclear reactors and cyclotrons are today the main producing facilities of artificial radioisotopes. These radionuclides are widely used, in particular, in nuclear medicine, such as in radiation therapy (with use of the radioisotope Cobalt-60) and medical imaging (with use of the radioisotope technetium-99). In this framework, the Government of Tunisia has decided to install a sub-critical assembly at CNSTN. This facility will serve as an efficient tool for national human resources development and it will be also extremely useful for carrying out research projects by scientists in order to provide them with a basic understanding of the main concepts relevant to nuclear reactors. The licensing process for the installation of the facility will also bring valuable experience in the development of a nuclear infrastructure in the Country. We propose to summarize in this paper, the basic information concerning the production of radioisotopes with research reactors. We also present the state of art and useful information about the current project to implement a subcritical assembly-reactor in CNSTN (The National Centre for Nuclear Sciences and Technology). A project carried out with the assistance and the support of the IAEA (The international Atomic Energy Agency).