

Possibilities of producing radioisotopes and radiopharmaceuticals in Poland

In Poland, until the end of the 20th century, radioisotopes for medical use could be produced using the “Maria” research nuclear reactor installed at the National Centre for Nuclear Research in Świerk near Warsaw. At the beginning of the 21st century, diagnostic the Positron Emission Tomography (PET) was introduced in medicine. Along with it, several centers equipped with so-called medical cyclotrons were established. They allow for industrial production mainly of the radioisotope fluorine ^{18}F , necessary for the synthesis of the radiopharmaceutical fluorodeoxyglucose FDG. The appearance of such cyclotrons made it possible to expand the production of isotopes to include those that are typical for cyclotrons, such as isotopes of scandium ^{43}Sc and ^{44}Sc , zirconium ^{89}Zr , lanthanum ^{135}La or copper. The current network of centers equipped with cyclotrons as well as the possibilities of producing radioisotopes other than fluorine ^{18}F will be presented. A list of radioisotopes other than technetium $^{99\text{m}}\text{Tc}$ using a nuclear reactor will also be presented.

Section

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