SUMMARY

RADIOISOTOPES PRODUCTION FOR NUCLEAR MEDICINE, IN BRAZIL.

COMISSÃO NACIONAL DE ENERGIA NUCLEAR/SP
DEPARTAMENTO DE PROCESSAMENTO

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The radioisotopes production in Brazil started in 1959 with ^{131}I for thyroidal function studies.

During the following decades, the demand of radioisotopes has greatly increased in variety and quantity, thus compelling us to increase the production in our country.

However, due to the impossibility to produce all the radioisotopes useful for the Nuclear Medicine because of the discontinous operation of the IEA-R_1 Reactor, it has become necessary to import some of them.

In 1981 we started the importation of ^{99}Mo for the preparation of ^{99m}Tc-generators, which brought a lot of benefits to the Brazilian physicians.

Soon after the ^{99m}Tc-generators production came the preparation of lyophylized kits for labelling with ^{99m}Tc as diagnostic agents for a widespread use in humans. At the same time several compounds labelled with ^{131}I and ^{51}Cr were prepared and commercialized.

With the purpose to stop the present importations, next year the IEA-R_1 Reactor will operate continuously with a thermal neutron flux of 5×10^{13} n/cm^2 sec, which will allow the production of new radioisotopes for Nuclear Medicine applications.

In the field of radioisotopes production in cyclotron, we are already producing ^{67}Ga, and we have in project the productions of: ^{123}I, ^{111}In, and ^{81m}Kr - generator.

^{131}I-labelled molecules like fatty acids, ^{99m}Tc-labeiled isonitriles and oximes for cardiac and brain fuctions, respectively, will be prepared.

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