عنوان مقاله:

[The radioisotope ۶۷Ga (T ۱/۲ = ۷۸ h) in extensively used as single photon marker for detecting the presence [Persian

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مجله پزشکی هسته ای ایران, دوره 3, شماره 2 (سال: 1374)

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نویسندگان:

Behrooz Fateh - *Cyclotron Department, Nuclear Research Center, AEOI, Karaj, Iran*

Ali Sattari - *Cyclotron Department, Nuclear Research Center, AEOI, Karaj, Iran*

Mohammad Shafiei - *Cyclotron Department, Nuclear Research Center, AEOI, Karaj, Iran*

Baratali Akbari - *Cyclotron Department, Nuclear Research Center, AEOI, Karaj, Iran*

Hossein Afarideh - *Cyclotron Department, Nuclear Research Center, AEOI, Karaj, Iran*

Mohammad Hajisaeed - *Cyclotron Department, Nuclear Research Center, AEOI, Karaj, Iran*

خلاصه مقاله:

The radioisotope ۶۷Ga (T ۱/۲ = ۷۸ h) in extensively used as single photon marker for detecting the presence of malignancy and the diagnosis of inflammatory diseases. The high tumor specificity of carrier-free ۶۷Ga make it one of the most interesting radionuclides in nuclear medicine for in vivo scanning studies. ۶۷Ga is a cyclotron produced radioisotopes and is one of the radiopharmaceuticals which is produced at our center. An enriched ۶۸Zn cyclotron target design has been developed for the large-scale production of carrier-free ۶۷Ga with -<۵ percent ۶۶Ga contamination as one of the impurities. The advantage of high ۶۷Ga yield from proton beam bombardment of enriched Zinc is somewhat to our disadvantage due to the high price of enriched Zinc. Due to this problem another alternative method for Ga-۶۷ production was sought. Our theoritical and experimental studies have been resulted to production of ۶۷Ga by irradiating natural Zinc with deuteron beam. The production of the radiopharmaceutical is achieved by two steps. ۱) Deuteron bombardment of natural Zine target in the cyclotron and subsequent production of Ga-۶۷. ۲) Chemical processing which involves the separation of ۶۷Ga from target material. After quality control testing, the produced ۶۷GaCl۳ is converted to citrate and as a sterile and pyrogen free product, it is ready for human use.

کلمات کلیدی:

لینک ثابت مقاله در پایگاه سیویلیکا: