

OPTIMIZATION OF THE METHOD FOR THE PRODUCTION OF ^{67}Ga AT IPEN-CNEN/SP

E E Dos Santos y M S A Cammarosano

Instituto de Pesquisas Energéticas e Nucleares. Comissão Nacional de Energia Nuclear/SP

Gallium-67 is used in Nuclear Medicine to detect tumours and inflammatory lesions in soft tissues. It is obtained by the $^{68}\text{Zn} (p,2n) ^{67}\text{Ga}$ reaction in the cyclotron CV-28 at IPEN-CNEN/SP and the chemical separation of Ga/Zn is carried out by ion exchanger.

The purpose of this present work is to optimize Ga/Zn separation yields and to use chemical reagents in low concentrations to avoid the corrosion of the production cell components.

A comparative study has been made among the cation exchanges AG 50W-X8 and AG 50W-X4 (BioRad) and the organic absorbent SM-7 (Bio Beads) in order to verify the absorption and the recoveries of ^{67}Ga .

The results showed the advantages in using SM-7 absorbent: the satisfactory absorption of ^{67}Ga (99,7 ± 1,8)% and also the possibility of working with chemical reagents in low concentrations.