

## COMPARATIVE STUDY OF COMPUTERISED GLOW CURVE ANALYSIS IN ROUTINE DOSIMETRY

D. Mebhah and F.Z. Dehimi

Laboratoire de dosimétrie externe, Centre de Radioprotection et de Sécurité  
2, Bd Frantz Fanon, B.P. 1017, 16 000 Alger, Algeria.

A computer program for the glow curve deconvolution analysis in radiation dosimetry, mainly personal and environmental dosimetry carried out with LiF: Mg,Ti and CaF<sub>2</sub>:Dy has been studied. The program is based on knowledge of the physical parameters of the glow peaks determined using two different peak shapes. The first peak shape is calculated by the first order kinetic and the second one by a gaussian technique.

Three ways of determining these parameters have been investigated. They consist of marking the initial parameters on the curve, initiating the deconvolution process from choosen parameters and calculating the parameters automatically in the global program. The intercomparaison of the capacity to reproduce the real curve involving the three options, and their performances in field applications for two processing options ( research or production mode ), will be presented. The advantages of these methods of glow curve analysis in routine dosimetry on precision and low detection limits compared to the conventional methods will be discussed.