

THE EFFECT OF PRE-HEATING AND PRE-IRRADIATION WITH GAMMA-RAYS ON THERMAL ANNEALING IN BIS-[N-BENZOIL-N-(o)TOLYLHYDROXYLAMINATE] COPPER (II)

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ABSTRACT

The main purpose of this work was to make a contribution on the study of the chemical effects of the  $(n, \gamma)$  reaction on copper chelate. The influence of some factors such as pre-heating and pre-irradiation with gamma-rays on the retention and thermal annealing of bis-[N-benzoil-N-(o) tolylhydroxylamine] copper (II) was investigated. The complex was synthesized and later characterized by means of: determination of the melting-point, elemental analysis, infra-red and visible range absorption spectrophotometry. The compound was heated and also irradiated with gamma-rays in order to verify the effect of thermolysis on the retention. It seems that heat and gamma-radiation can produce defects which will lower the susceptibility of the compound to thermal annealing. On the basis on the model involving electronic species some explanation of our results were made and a mechanism was proposed for the retention and thermal annealing assuming the capture of free electrons and also the existence of holes.