

ABSTRACT

In this thesis "The effect of Ultrasonic Irradiation on solutions of Poly(styrene) and Poly(vinyl chloride) and the possibility of copolymerisation of PVC and styrene" were investigated. The aim of the work was to investigate the relationship between the extent of degradation, the molecular weight and structure of polymers exposed to ultrasound.

Poly(vinyl chloride) and styrene were exposed to ultrasound in an inert atmosphere, at constant amplitude of ultrasonic radiations and at constant temperatures of 30 & $40 \pm 1^\circ \text{C}$.

It explores the possibility of trapping the active species generated during degradation. It is concluded from FTIR analysis and DTA that a copolymer was prepared which has different properties than that of PVC and styrene.