

P R E F A C E

The work embodied in the thesis forms the subject of investigation which was started by the author in July, 1954. The main object of these investigations was to elucidate the mechanism of polymerization of vinyl esters of higher fatty acids, about which references in literature are meagre.

Results obtained from a study of the kinetics of the polymerizations of vinyl esters are given in Chapter II. Chapter III deals with the study of the effect of benzene on the rate of polymerization of these esters. The investigations reported in Chapter IV deal with derivation of the constants of the Staudinger-Mark equation, for these esters. The average effective dimensions of the macromolecules in solution have been computed. Molecular weight determination of the various poly vinyl esters and its correlation with the rate of polymerization form the subject matter of Chapter V. In Chapter VI is reported the copolymerization of vinyl iso-caproate with vinyl acetate and also high pressure copolymerization with ethylene. Chapter VII summarises the results of these investigations.

The results obtained are to the best of the knowledge of the author, original and reported for the first time and form a distinct contribution to knowledge in the field.

In conclusion the author wishes to take this opportunity to record his grateful thanks to Dr. M.S.Muthana, Assistant Professor, Department of Applied Chemistry, Indian Institute of

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