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**PHASE TRANSFER CATALYSIS IN REACTIONS OF VINYLIDENE FLUORIDE--
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Phase transfer catalysis (PTC) in dehydrofluorination of polyvinylidene fluoride (PVDF) has been recently investigated. Operating at 70-90°C on powder or film PVDF with aqueous NaOH 4-5 N and a PTC catalyst an amount of 9-100% of unsaturation was obtained [1]. No information was given about degradation of the polymer that likely seems to occur in these conditions.

Aim of this work is a preliminary study on the PTC dehydrofluorination of vinylidene fluoride-hexafluoropropene copolymers in a wide range of composition (HFP from 0 to 40 mol %) and operating in milder conditions than above ($T = 25-50^{\circ}\text{C}$, $\text{NaOH} < 0.5 \text{ N}$, with a ratio meq base/g polymer ranging from 1 to 3).

The level of unsaturation was detected by F^{-} analysis in the aqueous phase on the assumption that the elimination of one HF affords one unsaturation in the polymer chain. The resulting structure has been studied by I.R. and N.M.R. spectra. Polymer degradation, indicated by the decrease of the intrinsic viscosity, seems to occur only by strong alkaline treatment. In our reaction conditions no change of the intrinsic viscosity is observed with unsaturation content up to 4%.

The ability to give unsaturation has been related to the HFP content in the copolymer. The results show an increase of the rate of dehydrofluorination with increasing HF content.

1 H. Kise, H. Ogata, J. Polym. Sci., Polym. Chem. Ed., 21, (1983) 3443.