

In searching for a more efficient dehydrofluorinating system, we found that a mixture of a solution (20 wt. %) of KOH in EtOH with acetone in a 1:9 volume ratio is a very efficient dehydrofluorinating system for PVDF. A film (20 μm) treated with this mixture for 1 h at $\sim 20^\circ\text{C}$ had a carbyne structure and contained no more than 1 wt. % residual fluorine for the entire bulk (Fig. 1). It should be noted that this mixture was not very efficient with polyvinylidene chloride. This behavior can probably be explained from the point of view of the ratio of the surface energies of the halogen-containing polymer and reaction mixture. Since the starting polymers have different solubility parameters, by selecting the corresponding solvents and concentrations, it is possible to vary the ratio of the surface energies of the polymer and reacting medium and attain a more efficient reaction.

LITERATURE CITED

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