

PREPARATION OF FLUOROETHYLENES FROM 1,2-DIFLUOROTETRACHLOROETHANE

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1,2-Dichlorodifluoroethylene (A), 1-chloro-1,2-difluoroethylene (B) and 1,2-difluoroethylene (C) are important monomers in the preparation of fluorinated copolymers and intermediates in the preparation of fluoroelastomers. They were prepared from 1,2-difluorotetrachloroethane, an intermediate in the industrial production of chlorofluoroethanes.

Olefins A,B,C have been so far prepared one by one through dehydrohalogenation and/or dehalogenation of the corresponding haloalkanes, in the liquid phase, according to known procedures. This paper reports the investigation of a hydrogenolysis procedure, in the gaseous phase, catalyzed by Pd/C, for the simultaneous obtainment of the three olefins.

The operating parameters for the preparation of the olefin involved, have been defined.

The procedure can be carried out in one step or in subsequent steps to get increased yields and conversions.