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ULTRAVIOLET AND ELECTRON RADIATION INDUCED ADDITION OF N,N,N′,-N′-TETRAMETHYL-1,ω-ALKANEDIAMINES TO FLUORINATED ALKENES

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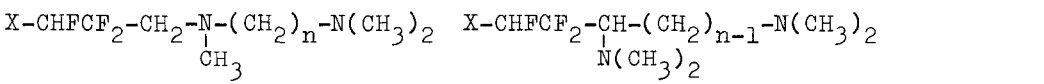
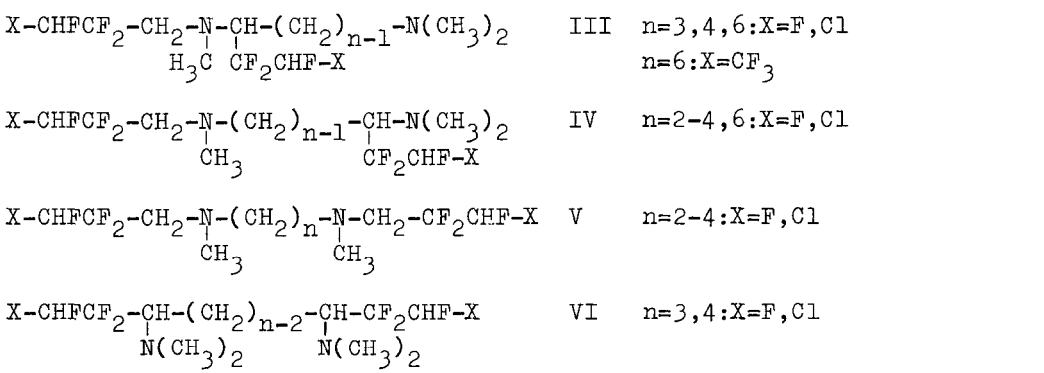
The predominant products under the both photochemically and γ-^{60}Co induced addition of N,N,N′,N′-tetramethyl-1,ω-diamines to fluorinated alkenes are 1:1 adducts I and II:



I for n=2-4,6:X=F,Cl; for n=6:X=CF_3; for n=10:X=F

II

It is shown that the minor 1:2 adducts III-VI are the results of intramolecular 1,m (m=5-10) hydrogen transfer in 1:1 adductradical intermediates.



III n=3,4,6:X=F,Cl; n=6:X=CF_3

IV n=2-4,6:X=F,Cl

V n=2-4:X=F,Cl

VI n=3,4:X=F,Cl

Adducts I and II (e.g. X=CF_3, n=6) were converted into the surface active quaternary ammonium salts.