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Mechanism of Chlorination by Means of Deuterated Model Compounds*

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β, β -Dideuterated poly(vinyl chloride) (β, β -d₂-PVC) was chlorinated under conditions of photochemical suspension chlorination in concentrated hydrochloric acid with addition of chloroform as a swelling agent, and also under conditions of thermal solution chlorination in tetrachloroethane. The ¹H-NMR spectra of chlorinated β, β -d₂-PVC (β, β -d₂-CPVC) were measured. The deuterium concentration was determined in combustion products of β, β -d₂-CPVC as the D₂O:H₂O ratio by means of mass spectroscopy. It was found that the concentration of -CHCl- groups decreases in both the photochemical suspension chlorination and in the thermal solution chlorination. The structural nonidentity of β, β -d₂-PVC chlorinated in suspension and in solution was confirmed.

*The full text of this communication will be published elsewhere
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