Alkylation of Pyrocatechol in *tert*-Butyl Alcohol–Sulfuric Acid–Benzene

V. B. Vol'eva, T. I. Prokof'eva, I. S. Belostotskaya, N. L. Komissarova, D. B. Gorbunov, and L. N. Kurkovskaya

Emanuel' Institute of Biochemical Physics, Russian Academy of Sciences, ul. Kosygina 4, Moscow, 119334 Russia
e-mail: komissarova@polymer.chph.ras.ru

Received February 4, 2011

Abstract—Alkylation of pyrocatechol with *tert*-butyl alcohol in benzene in the presence of sulfuric acid gave 3,5-di-*tert*-butylbenzene-1,2-diol in a higher yield than in analogous reaction with *tert*-butyl alcohol. This result was rationalized by reduction of inhibitory effect of liberated water, formation of heterogeneous system, and occurrence of the alkylation process in nonpolar organic phase. Intermediate products were identified and found to undergo intra- and intermolecular *tert*-butyl group transfer with formation of more stable 3,5-di-*tert*-butylbenzene-1,2-diol. The formation of *p*-di-*tert*-butylbenzene indicated participation of benzene in cross-alkylation processes.

DOI: 10.1134/S1070428011090089