Modern Friedel-Crafts chemistry. XVIII. Akylation of benzene with 1,2-dibromo-2-methylpropane, 1-chloro-2-methyl-2-phenylpropane, 3-chloro-2-methyl-1-propene and 1-bromo-2-methyl-1-propene. Khalaf, Ali Ali; Albar, Hassan A.. Dep. Chem., Fac. Sci., King Abdul-Aziz Univ., Jeddah, Saudi Arabia. Journal of the Indian Chemical Society (**1995**), 72(2), 87-91. CODEN: JICSAH ISSN: 0019-4522. Journal written in English. CAN 123:256230 AN 1995:673403 CAPLUS (Copyright 2004 ACS on SciFinder (R))

Abstract

Alkylation of benzene with the title compds. gave similar product mixts. contg. isomeric 1,2-diphenyl-2-methylpropane, 1,1-diphenyl-2-methylpropane and dl- and meso-2,3-diphenylbutane in alkylations catalyzed by appreciable amts. of AlCl3 or Al-HCl(g) and of 9 and 10 only in alkylations catalyzed by the milder catalysts AlCl3-CH3NO2, ZrCl4 and TiCl4. In almost all cases, 1,2-diphenyl-2-methylpropane and 1,1-diphenyl-2-methylpropane were always produced in an apparent equil. ratio of approx. 2:1. These new results disproved numerous earlier reports claiming the products from these reactions to contain only 1,2-diphenyl-2-methylpropane and meso-2,3-diphenylbutane depending on catalyst and conditions. Mechanistic interpretations are given to account for the results.