

Preparative and Control Hydroxy and Carboxylic Aromatic Compounds through the Disproportionate Reaction of Benzaldehyde Derivatives

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ABSTRACT

Aromatic compounds with hydroxy and carboxylic functional group in the industrial sector could be obtained by the disproportionate reaction of benzaldehyde derivatives. The continuation of this research is to develop the optimal reaction conditions using several benzaldehyde derivatives, which can later be used as laboratory procedures in organic experiment. The preparation of hydroxy and carboxylic functional groups by optimizing of reaction method. The synthesis was done by reacting benzaldehyde as comparison under various reaction conditions. Basic catalysts (KOH and NaOH) were used in various concentrations. Several reaction methods were used, including grinding, microwave, sonication, and semi-conventional. Further, the same procedure also applied to the benzaldehyde derivatives (3-hydroxybenzaldehyde, 4-hydroxybenzaldehyde, 4-methoxybenzaldehyde, and 4-hydroxy-3-methoxybenzaldehyde). The results were used to develop reaction conditions and procedures for the synthesis of hydroxy and carboxylic functional group compounds as disproportionate reaction standard for aldehyde compounds. The outcome of this research was also published in an indexed international journal and a Sinta-indexed journal.

Kata Kunci: Disproportionation, Benzaldehyde, Hydroxy, Carboxylic