

DNT,纯度达 98.8%,收率最高可达 94%。

(2) 适宜硝化反应条件为硝酸与甲苯的摩尔比 8/1,反应温度 60 °C,反应时间 1 h。

(3) 硝酸作为硝化剂,稀硝酸可以浓缩,循环利用,显著降低“三废”治理费用,因此该法具有工业化应用价值。

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Green Synthesis of Dinitrotoluene

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Abstract: Dinitrotoluene(DNT) was prepared by nitrating toluene with nitric acid(97%) to avoid the use of mixed sulfuric acid/nitric acid which is troublesome and energy-expensing for recycling. After investigating the factors affecting the nitration, the optimized conditions were worked out and might be as follows: molar ratio of nitric acid/ toluene 8 : 1, temperature 60 °C, and time 1 h. The resulting DNT's yield was 94%, purity was 98.8%, ratio of 2,4-DNT to 2,6-DNT was 4.3.

Key words: 2, 4- dinitrotoluene; 2, 6- dinitrotoluene; green nitration

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