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Preparation of 2,4-Dinitroimidazole by Thermal Rearrangement of 1,4-DNI

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Abstract: The thermal decomposition of 1,4-dinitroimidazole was measured by DSC. Based on experiments, this paper studied the thermal rearrangement process for preparing 2,4-dinitroimidazole from 1,4-dinitroimidazole. The influences of reaction temperature and reaction time on the yield of 2,4-dinitroimidazole were discussed. An optional production condition was obtained by the experiments; reaction temperature 125 °C, reaction time 3.5 ~ 4 h, yield 95%.

Key words: organic chemistry; 1,4-dinitroimidazole; 2,4-dinitroimidazole; thermal rearrangement

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