N-Phenyl-3-hydroxyphthalimidine: Reduction of *N*-Phenylphthalimide with Sodium Borohydride

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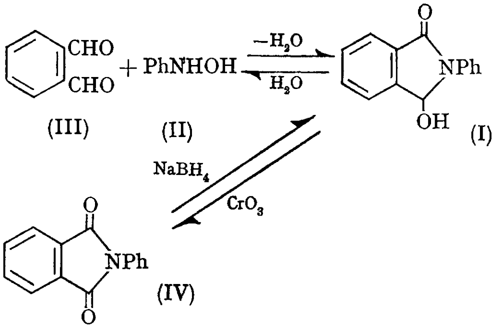
DURING the course of investigation of dinitrones, *N*-phenyl-3-hydroxyphthalimidine (I),[1] m.p. 167—168°, was isolated from the reaction of *N*-phenylhydroxyamine (II)[2] and *o*-phthalaldehyde (III) in 60% yield. The structure of (I) was established from its elemental analysis, infrared and n.m.r. spectra, oxidation to *N*-phenylphthalimide (IV) with chromic acid, and hydrolysis to (II) and (III).

Reduction of (IV) with lithium aluminium hydride resulted in reduction of both carbonyl groups. However, reduction of (IV) with sodium borohydride in methanol at room temperature gave (I) in 40% yield. To the knowledge of this author, there is no former reported successful reduction of an imide with sodium borohydride.



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[1] Similar ring closure to give *N*-acetyl-1,3-dihydroxyisoindoline was reported: R. D. Reynolds and R. J. Couboy, *J. Org. Chem.*, 1965, 30, 2251.

[2] O. Kamm, *Org. Synth.*, Coll. Vol. I, 2nd edn., 1964, p. 445.