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Publisher *Taylor & Francis*

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Organic Preparations and Procedures International

Publication details, including instructions for authors and subscription information:

<http://www.informaworld.com/smpp/title~content=t902189982>

7-SUBSTITUTED-2,4-DIPHENYL-3H-1,5-BENZODIAZEPINES

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To cite this Article Amey, Ronald L. and Heindel, Ned D.(1976) '7-SUBSTITUTED-2,4-DIPHENYL-3H-1,5-BENZODIAZEPINES', *Organic Preparations and Procedures International*, 8: 6, 306 – 307

To link to this Article: DOI: 10.1080/00304947609355648

URL: <http://dx.doi.org/10.1080/00304947609355648>

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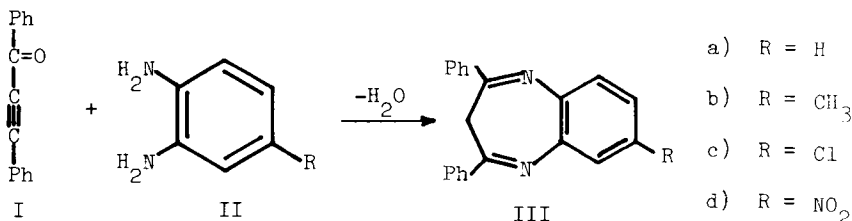
7-SUBSTITUTED-2,4-DIPHENYL-3H-1,5-BENZODIAZEPINES

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(11/19/76)

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The Ried-Korshunov condensation^{1,2} of three substituted *o*-phenylene-diamines (II) with 1,3-diphenyl-2-propyn-1-one (I) in an alcohol-acetic acid medium gives III.



EXPERIMENTAL

General Procedure.— A heterogeneous mixture was prepared from 5.0 mmoles each of I and II in 10 ml of ethanol containing 2 ml of acetic acid. The mixture was stirred at reflux for 3 hrs, chilled to room temperature and filtered. A single recrystallization from ethanol yielded analytical material.

IIIa, 74% yield, mp. 139-141°, lit.¹ mp. 140-141°.

IIIb, 25% yield, mp. 117-118°, lit.⁴ mp. 111°; pmr (CDCl₃) δ 2.4 (s, 3, CH₃), 3.6 (s, 2, CH₂), and 7.0-8.1 (m, 13, ArH).

Anal. Calcd. for C₂₂H₁₈N₂: C, 85.13; H, 5.84; N, 9.03.

Found: C, 85.15; H, 6.03; N, 8.89.

IIIc, 37% yield, mp. 165-167°; pmr (CDCl₃) δ 3.7 (s, 2, CH₂), and 7.3-8.0 (m, 13, ArH).

Anal. Calcd. for C₂₁H₁₅ClN₂: C, 76.24; H, 4.57; N, 8.46.

Found: C, 76.21; H, 4.77; N, 8.34.

For IIIId, 50% yield, mp. 243-244°; the general procedure was altered as follows: 60 ml of ethanol containing 5 ml of acetic acid were employed as solvent and a reflux time of 12 hrs was utilized. pmr (DMSO-d₆) δ 4.32 (s, 2, CH₂) and 7.4-8.4 (m, 13, ArH).

Anal. Calcd. for C₂₁H₁₅N₃O₂: C, 73.89; H, 4.43; N, 12.30.

Found: C, 73.62; H, 4.72; N, 12.19.

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2. S. P. Korshunov, V. M. Kazantseva, L. A. Vopilina, V. S. Pisareva and N. V. Utekhina, *Khim. Geterotsykl. Soedin.*, 1421 (1973); *Chem. Abstr.*, 80, 27225r (1973).
3. Biological data may be obtained from R. L. A.
4. This compound was originally isolated as a rearrangement product of an isoxazolone which was itself prepared in a multi-step synthesis, W. Muller, U. Kraatz and F. Korte, *Chem. Ber.*, 106, 332 (1973).