

BIBLIOGRAPHY

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SYNTHESIS OF NEW 11-ARYLSUBSTITUTED DERIVATIVES OF 5-HYDROXY-3,3-DIMETHYL-1,2,3,4,5,11-HEXAHYDROINDENO [1,2-B] QUINOLINE-1,10-DIONE

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The aim of this work was synthesis the new asymmetrical polycyclic derivatives of N-OH substituted 1,4-dihydropyridin. 5-Hydroxy-11-(4-hydroxyphenyl)-3,3-dimethyl-1,2,3,4,5,11-hexahydroindeno [1,2-b] quinoline-1,10-dione and 5-Hydroxy-11-(4-hydroxy-3-methoxyphenyl)-3,3-dimethyl-1,2,3,4,5,11-hexahydroindeno [1,2-b] quinoline-1,10-dione were obtained. It was shown that both obtained substances can be used as acid-base titration indicators.

Keywords: organic synthesis, Hantzsch reaction, 5-Hydroxy-3,3-dimethyl-1,2,3,4,5,11-hexahydroindeno [1,2-b] quinoline-1,10-diones.

In this work we synthesized two new polycyclic derivatives of unsymmetrically substituted 1,4-dihydropyridine which can be used as indicators of the basicity of the medium. To prepare the asymmetric derivative of 1,4-dihydropyridine, we carried out the reaction in two steps. Initially, an unsaturated diketone (IIIa or IIIb) was obtained by reacting the indanedione (I) with aromatic aldehyde (IIa or IIb) (Knoevenagel condensation), then dimedone (IV) and hydroxylamine hydrochloride were added to the reaction mixture, and through intermediates (Va or Vb, VIa or VIb) a pentacycle (VIIa or VIIb) was obtained which was an unsymmetrical derivative of 1,4-dihydropyridine (Fig. 1).

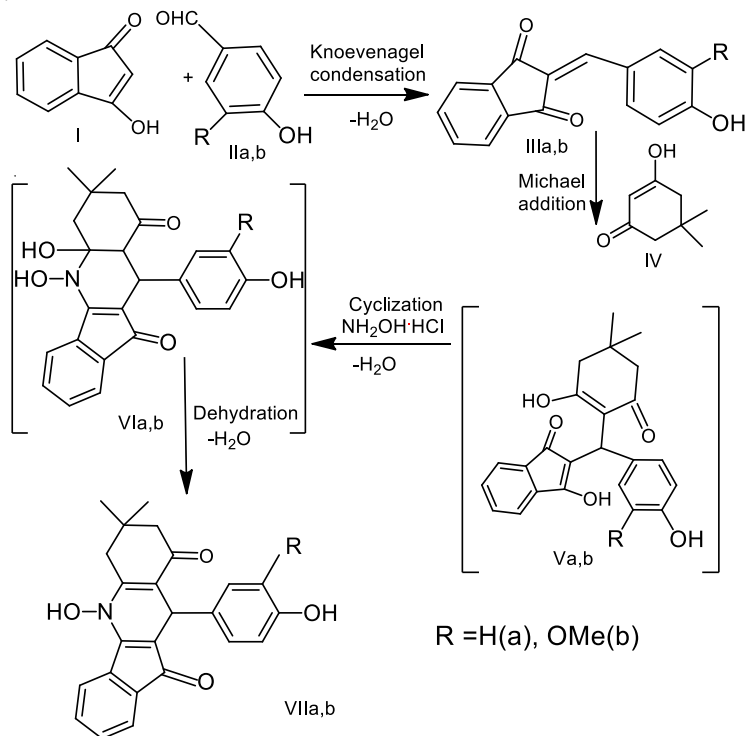


Fig. 1. Synthesis of 5-Hydroxy-3,3-dimethyl-1,2,3,4,5,11-hexahydroindeno [1,2-b] quinoline-1,10-diones VIIa,b