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| Title | A study on the synthesis of 5,7-diaryl-1,2,3,4-tetrahydro-2,4-dioxo-5*H*-pyrano[2,3-*d*]pyrimidines | | |
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| Abstract |  |
| 5,7-Diphenyl-1,2,3,4-tetrahydro-2,4-dioxo-5H-pyrano[2,3-d]pyrimidine (4a) has been synthesized in one-step by the condensation of barbituric acid (1) with benzylideneacetophenone (2a) in glacial acetic acid in the presence of phosphorous pentoxide. Reaction of barbituric acid (1) with arylideneacetophenones (2b-d) which gave the corresponding adducts of 5-(1,3-diaryl-1-oxopropyl)pyrimidine (1H, 3H, 5H)-2,4,6-triones (3a-c) previously in 50% aqueous ethanol on further reflux in gl. acetic acid in the presence of phosphorous pentoxide also give the corresponding pyranopyrimidines 5,7-diaryl-1,2,3,4-tetrahydro-2,4-dioxo-5H-pyrano[2,3-d]pyrimidines (4b-d). The structures of the compounds 4a-d were determined by their UV, IR, 1H NMR and 13C NMR spectral data. | |