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Crystallography of 3,3,6,6-Tetramethyl-9-(3,4-dimethylphenyl)-3,4,6,7,9,10-hexahydroacridine-1,8- dione

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Abstract—*The title compound 3,3,6,6-Tetramethyl-9-(3,4-dimethylphenyl)-3,4,6,7,9,10-hexahydroacridine-1,8- dione ($C_{25}H_{31}NO_2$) was synthesized and crystallized by the Chemistry Department of Shivaji University, Kohlapur. The compound crystallizes in the monoclinic space group $P2_1/c$ with unit cell parameters: a = 18.616(3), b = 9.9747(13), c = 11.8093(15) Å, β = 91.89(13)°, Z = 4. The crystal structure was solved by direct methods and refined by full-matrix least-squares procedures to a final R-value of 0.075 for 3088 observed reflections. The central ring of the acridinedione system adopts a boat conformation. The four essentially planar atoms (C10/C11/C13/C14) of this ring [maximum deviations = 0.2047(3) Å] forms dihedral angles of 87.32°(13), with the benzene ring. The two outer rings of the acridinedione system adopt sofa conformations. The crystal packing is stabilized by intermolecular N-H…O interactions.*

Keywords: *Crystal structure.Direct method. Boat and Sofa Conformations. Intermolecular interactions*