Synthesis of New Cyano-Quinoline Derivatives by the Baylis–Hillman Reaction

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Abstract

Quinoline derivatives represent the major class of heterocycles, and a number of preparations have been known since the late 1800s. The quinoline ring system occurs in various natural products, especially in alkaloids. The quinoline skeleton is often used for the design of many synthetic compounds with diverse pharmacological properties. A new quinoline derivative was crystallized from the reaction between acrylonitrile and 2-chloro-3-formyl quinoline derivatives which had themselves been prepared from the Meth Cohn method. The reaction catalyzed by DABCO, gives rise to five new 2-[2-Chloro-quinolin-3-yl)-hydroxy-methyl]-acrylonitrile derivatives. The crystal structure of the 7-Methyoxy-substituted one crystallizes in monoclinic space group C2/c, a = 17.1090 (7) Å, b = 8.3119 (5) Å, c = 19.7949 (6) Å, β = 101.922 (2)°, and its cohesion was assured by O–H···N, O–H···O and C–H···O …