

Abstract

Coumarin nucleus derivatives shows various activities like anticoagulant, antimicrobial, anti-inflammatory, analgesic, antioxidant, anticancer, antiviral, antimalarial etc. Some novel derivatives of 7-hydroxy-4-methyl coumarin were synthesized. The title compounds were obtained by the reaction of 7-hydroxy-4-methyl coumarin with Benzaldehyde in the presence of Sulphuric acid afforded 7-Hydroxy-4-[(E)-2phenyl Ethyl]-2H-chromen-2-one, which react with Benzoyl Chloride in Sodium Chloride afforded 2-oxo-4-[(E)-2phenyl ethyl]-2H-chromen-7-yl-benzoate. And another title compounds were obtained by the reaction of 7-hydroxy-4-methyl coumarin with Acetaldehyde in the presence of Sulphuric acid afforded 7-Hydroxy-4-[(1E)-prop-1-en-1yl]-2H-chromen-2-one, which react with Benzoyl Chloride in Sodium Chloride afforded 2-oxo-4-[(1E)-prop-1-en-1yl]-2H-chromen-7-yl-benzoate. The synthesized compounds were confirmed by FT-IR, UV-visible spectroscopy, Melting point apparatus. In the present study four novel coumarin derivatives are characterized for IR spectra. Coumarins are heterocyclic compounds and have many medical properties such as antifungal, antibacterial, antioxidants activity, and anti-inflammatory. Coumarin and its derivatives possess anticancer activity against different types of cancers such as prostate, renal, breast, laryngeal, lung, colon, CNS, leukemia, and malignant melanoma. Anti-HIV antiviral coumarin-based derivatives have the potential to inhibit different stages in the HIV replication cycle, inclusive of virus-host cell attachment, and cell membrane fusion.

Keywords: Coumarin, Benzaldehyde, Acetaldehyde, Antimicrobial, FTIR, UV-Visible spectrophotometer.