

Synthesis, characterization and evaluation of biological activities of some 2,3-diaryl bicyclo methanones

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Abstract. Sixteen (3,4-dichlorophenyl)-3-(substituted phenyl)bicyclo[2.2.1]hept-5-ene-2-yl) methanone derivatives have been synthesized by an aqueous phase fly-ash catalyzed [4+2] cycloaddition Diels-Alder reaction of cyclopentadiene and 3,4-dichloro phenyl chalcones. The yields of the methanones were greater than 60%. The synthesized methanones were characterized by their physical constants and spectral data. The antimicrobial and antioxidant activities of the synthesized methanones were evaluated using a variety of bacterial and fungal species and DPPH radical scavenging methods.

Keywords: bicyclo[2.2.1]hept-5-ene-2-yl-methanones; Diels-Alder reaction; antimicrobial activities; antioxidant activity.

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