Antimicrobial Bioactive Compound Isolated from the Fungus Myrothecium verrucaria

Abstract

Bioactive chemical compound M1 [3-(5,5-dimethylhexyloxy) 2,2,4,4-tetramethyl-cyclohexanone] was extracted, purified and identified from the fungal culture of *Myrothecium verrucaria* isolated from soil in southern Iraq. The identification of the compound by using GC-Mass and H^1NMR was confirmed. Solubility, toxicity, purity and the chemical formula and molecular weight of M1 compound were determined. The antimicrobial bioactivity of the purified compound against the bacterial strains *E. coli* and *S. aureus* and the dermatophytic fungus *Microsporum gypseum* was tested using a disc diffusion agar method. The minimal inhibitory concentration (MIC) was also performed. Purified M1 compound exhibited a good bioactivity against the tested bacteria as well as against the dermatophyte isolate.