

ABSTRACT

Draconic acid has number of pharmaceutical applications and very commonly used in cosmetic products. The objective of this research work was to synthesize the new *S*-substituted derivatives of draconic acid through a series of reactions. The 4-methoxybenzohydrazide (**1**) reacted with the phenyl Isothiocyanate (**2**) to synthesize 5-(4-methoxyphenyl)-4-phenyl-4*H*-1,2,4-triazole-3-thiol (**3**) in the presence of methanol and sodium hydroxide, which was further subjected to substitution with different alkyl/aryl group in presence of *N,N*-dimethylformamide (DMF) and lithium hydride (LiH) to obtain (**5a&b**) *S*-substituted compounds.

The compound (**3**) was reacted with the 1-bromopentane and benzyl chloride to yield 3-(*n*-pentylthio)-5-(4-methoxyphenyl)-4-phenyl-4*H*-1,2,4-triazole (**5a**) and 3-(benzylthio)-5-(4-methoxyphenyl)-4-phenyl-4*H*-1,2,4-triazole (**5b**) respectively. The synthesized compounds were confirmed by the use of instrumental techniques such as ¹H-NMR, FTIR and Mass spectrometry. The insight study of the spectral data obtained through different instruments showed that substitution occurred at S-atom and confirmed their synthesis.