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SYNTHESIS AND CHARACTERIZATION OF NEW 2, 5-DISUBSTITUTED-1, 3, 4-THIADIAZOLE DERIVATIVES

SHETHA. F. AL-ZOBAYDIY[1] & ISRAAABDUL SATAR ISMAEL[2]

[1]Department Chemistry/College of Science for Women/University Baghdad, Iraq

[2]Department of Materials Research - Ministry of Science and Technology, Iraq

ABSTRACT

In this study, a new 1, 3, 4-Thiadiazole derivatives have been synthesized by many cyclization reactions. Starting from (2, 5 – dimercapto -1, 3, 4-Thiadiazole) a variety of compounds have been synthesized.Derivative (1) was synthesized by the reaction of hydrazine hydrate with carbon disulphide. The derivative (1) was reacted with 1, 2-dibromoethane in presence of alkali ethanol to give the derivative (2). The derivative (3) was obtainedfrom the reaction of derivative (2) with hydrazine hydrate. Schiff base (4) was formation by reacting of derivative(3) with p-Hydroxybenzaldehyde. From phenolic Schiff base (4), Methylolicderivative (5)has been prepared. Etheric derivative (6) was synthesized by the reaction ofMethylolicderivative withsaturated alcohol.Derivative (7)was synthesized by the reaction ofEthericderivative (6)withEpichlorohydrine. The last step of this study was the preparation of aderivative (8) by reacting of derivative(7) withmorpholine via ring opening.All these derivatives were verified by using (FT-IR, UV) spectra photometer,^{1}H-NMR spectra and elemental analysis (C.H.N.S).

KEYWORDS: Synthesis, New, 2, 5-Disubstituted--1, 3, 4-Thiadiazol Derivatives