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RESEARCH ARTICLE

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Preparation and bio-chemical identification of series organic compounds

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ABSTRACT - This study involved, synthesis of variety of organic compounds [1-6] such as thiol compound, oxazepine(oxazepam), diazepine(diazepam), macrocyclic Schiff base, azo compound which contains electron with donating group and azo compound is containing electron with drawing group and identification of their structures by {(C.H.N)-analysis, H.NMR – spectra, FT.IR – spectra and melting points} and study of their biological activities by biological studies, the data obtained give good supported for synthesized compounds[1-6].

Key words - Schiff, Azo, Oxazepine, Diazepine, Macrocycle

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In this paper, we have used Schiff base condensation as the ring –closing step to synthesize macrocycle[1] oxazepine [2],diazepine [3], thio compound [4], the heteroatoms in there structure such as (S, N, O)explain variety of applications[1-4], antitumor[5,6], in the biological engineering [7] and in other field [8-18] of their specific structures.

Also azo-compounds are synthesized in this research, it is known that aromatic azo compounds are widely used because of azo group (-N=N-)in their structures explain to their activity and variety of applications in several fields [19-23].

EXPERIMENTAL METHODOLOGY

- All chemical used were supplied from Fluka and BDH – Chemical Company
- All measurements were carried out by :
– Melting points : electro thermal 9300, melting point engineering LTD, U.K
– FT. IR-spectra : fourrier transform infrared shimadzu 8300 – (FT. IR), KBr disc was performed.
– H-NMR spectra with DMSO-solvent and (C.H.N)-analysis.

Synthesis of compound [1] :

The preparation starts with the reaction between 2,6-di formal-1,4-cresol (0.01mole, 1.01 g) and (0.02 mole, 1.2g) of ethylene diamine for(4hr),the precipitate was filtered off then (0.01mole, 2.48g) from this precipitate was refluxed with (0.01mole, 1.64g) of 2,6- diformyl-1,4- cresol for (5 hrs), to precipitate 83 per cent compound [1].

Synthesis of compounds [2-4] :

Refluxing mixture of (0.01mole, 1.36g) of p-methoxy benzaldehyde with [(0.01mole,1.44g) of 2-amino quinoline were refluxed for (4hrs), after cooling the precipitate was filtered off and dried, (0.01 mole, 2.62 g)of this precipitate was condensed with (0.01mole, 0.98g) of maliec anhydride for (6hr),the precipitate was filtered off to produce 81 per cent of compound [2], which (0.01mole, 3.34g) from it was reacted with one of [(0.01mole,1.23g) of p-methoxy aniline., (0.01 mole, 1.4g) of p-methoxy benzene thiol], respectively for (8hrs), after cooling the precipitate was filtered off and recrystallized to produce (80%, 83%) of compounds [3]and[4], respectively.

Synthesis of compound [5] :

(0.01 mole, 2.21g) of 3,5-di isopropyl-4-amino phenol was dissolved in 2 ml of hydrochloric acid and (0.7g) of sodium