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FOR WOMEN (Autonomous)**

(A unit of the Sisters of St. Anne of Tiruchirapalli)

Accredited with 'A' Grade (3rd Cycle) by NAAC

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SYNTHESIS, CHARACTERIZATION AND ANTIMICROBIAL ACTIVITIES OF TDPHTTA

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ABSTRACT

Heterocyclic compounds containing more than two have been studied in recent years for their use in various areas such as pharmaceuticals, pesticides, dyestuffs, polymers and medicinal fields. In the present study a novel 2,4,6-tris-(4-(5-(4-(dimethylamino)pyrazol-3-yl)phenyl)1,3,5-triazine-2,4,6-triamine is synthesized and characterized by various analytical techniques such as elemental analysis, UV-Vis, IR and ¹H NMR. The ligand shows marked antibacterial and antifungal activities against standard drugs.

Keywords: TDPHTTA and Antimicrobial activity.

1. GENERAL INTRODUCTION

Heterocyclic compounds are cyclic organic compounds that contain a ring structure where in one or more carbon atoms in the ring are replaced by heteroatoms such as N, O, S, etc. as part of the ring. Heterocyclic compounds containing more than two heteroatoms are less common in nature except some nitrogen heterocycles like triazines and tetrazines, which are well known and have been studied well for their use in various areas such as pharmaceuticals, pesticides, dyestuffs, polymers and bio chemicals. One of the reasons for heterocyclic compounds to be used in large areas is that their structures can be manipulated to achieve the required functional modifications. Properties such as difference in acidity or basicity, susceptibility for attack by electrophiles or nucleophiles and polarity are the direct result of the variation in electronic distribution across the molecular frames.

2. AIM AND SCOPE OF THE WORK

It is our interest to synthesize *s*-triazine derived pyrazoline ligand due to their wide range of application as functional materials and bioactivity. To characterize the pyrazoline ligand by various physical and chemical methods of analysis such as elemental analysis, UV-Vis, FTIR, NMR, studies. To compare the biological activity of novel pyrazoline ligand with that of a standard compound. The new ligand is expected to exhibit variety of characteristics such as biological and catalytic properties.

3. MATERIALS AND METHOD EMPLOYED

2,4,6-trichloro-1,3,5-triazine, chloromethane, Dimethyl formamide, imethylamine, Ethanol, N-dimethyl amino benzaldehyde and 4-amino acetophenone are purchased from Sigma Aldrich and S.D Fine chemicals.