



**Synthesis and characterization of monomeric copper (II) complex,
“Di aqua-(Pyridine-2, 6-dicarboxylato)-Copper (II),” with pyridine
2, 6-Dicarboxylic acid**

**Manob Jyoti Borah.*¹ R.K. Bhubon Singh², Upasana Bora Sinha¹ Toshienla Gurung³,
Pronob Jyoti Borah⁴.**

1. Department of Chemistry, Nagaland University, Hqrs- Lumami, Nagaland, India

2. Department of Chemistry, Manipur University, Imphal, India

3. Department of Zoology, Nagaland University, Hqrs- Lumami, Nagaland, India

4. Department of Civil engineering, Indian Institute of Technology, Guwahati, Assam, India

ABSTRACT

A new monomeric complex of Copper with pyridine 2,6-dicarboxylic acid was synthesized, the structure of the complex was determined by single crystal X-ray crystallography and was characterized spectrally with the help of IR and UV spectrometers and the magnetic moments of the reported complex was recorded. The complex crystallizes in the triclinic space group P1. The complex has the molecular formula $C_7H_7 CuNO_6$; $a = 4.71930 (10) \text{ \AA}$; $\alpha = 81.1180^\circ$, $b = 8.9785(2) \text{ \AA}$; $\beta = 85.7300^\circ$, $c = 10.3400(2) \text{ \AA}$; $\gamma = 83.3380^\circ$. The reported monomeric copper complex was observed to be penta-coordinated with two different types of donor atoms (nitrogen and oxygen). Details of the structures and spectroscopic properties have been discussed.

Keywords: Cu (II) complex - Pyridine 2, 6-dicarboxylic acid - X-ray structure - Spectral characterization.
