

## Synthesis, spectroscopic characterization of a new coordination compound of Cr(III) atom and pyridine-2,5-dicarboxylic acid

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Hydrogen bonding has emerged to be the most powerful tool among the directional intermolecular interactions in supramolecular synthesis. Evolution of an assembly depends on the nature of the functional group under consideration. To this end, assemblies involving the carboxylic group (-COOH) are very widely applied because of its ability to form robust hydrogen bonds on its own and also with the different compound and also mimics biological events [1-5]. The primary focus of contemporary crystal engineering, a sub-discipline of supramolecular chemistry, is the identification or design of molecular level building blocks (supramolecular synthons), whose interactions with other modular units [including self-complementary interaction(s)] exhibit some degree of predictability. A new complex of Cr(III) was synthesized and characterized by using elemental analysis, IR and  $^1\text{H}$  NMR spectroscopies. According to the obtained results the chemical formula of the resulting complex is  $[\text{9-aaH}][\text{Cr}(\text{py-2,5-dc})_2(\text{H}_2\text{O})_2] \cdot (\text{9-aa}) \cdot 2\text{H}_2\text{O}$  (**1**) (py-2,5-dc = pyridine-2,5-dicarboxylate, 9-aaH = protonated 9-aminoacridine), (9-aa = 9-aminoacridine). In the title compound py-2,5-dc act as a bidentate ligand through oxygen atom of carboxylate group and N atom of pyridine aromatic ring as well as two coordinative water molecules which are bounded to each Cr(III), giving a  $\text{CrN}_2\text{O}_4$  bound set. It seems the coordination geometry around each Cr(III) centre is distorted octahedron.

### Reference

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