

## Decoloring Characteristics for Nickel Phthalocyanine Dye using Dicyandiamide Resin and Ion-Exchanger

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The word phthalocyanine - from the Greek for naphtha (rock oil) and cyanine (blue) was first used by Linstead in 1933 to describe a new class of organic compounds. Phthalocyanine itself was probably discovered by accident in 1907, as a by-product during the synthesis of o-cyanobenzamide, but it was not until almost 20 years later that a patent was filed describing a manufacturing process. But, Phthalocyanine has been widely exploited in industry and academia, in a variety of applications ranging from conventional dye stuffs to catalysis, coatings for read/write CD-ROM's and as an anti-cancer agent in the last ten years. The majority of applications use the metal-substituted form of the molecule.

However, many metallophthalocyanines in aquatic environment are potentially toxic and are hard to be removed by conventional treatment processes.

In this paper, the effective removal of metal ions and organics from metal-complex dye solution was investigated by coagulation and adsorption of using dicyandiamide and various adsorbents which is the anion exchange styrene system resin.