

## Investigation of Mutagenicity and DNA Binding Properties of Metal-Free and Metallophthalocyanines Containing $\alpha$ -Naphtholbenzein Groups on the Peripheral Positions

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**Abstract :** In this work, phthalocyanine compounds containing  $\alpha$ -naphtholbenzein units have been synthesized. Mutagenicity and DNA binding properties of the compounds were investigated by Salmonella/Microsome Assay and spectrophotometer. According to the results of the preliminary range finding tests, the compounds gave no toxic effect to all tester strain *S. typhimurium* TA98 and TA100 at doses of 500, 1100, 350, 500 and 750  $\mu$ g/plate in the presence and absence of S9, respectively. This study showed that all compounds exhibited efficient DNA-binding activity. In conclusion, these non-toxic compounds may be used as effective DNA dyes for molecular biology studies.

**Keywords :** dye, mutagenicity, phthalocyanine, toxicity

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