



ChemTech

International Journal of ChemTech Research

CODEN (USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555
Vol.11 No.08, pp 89-97, 2018

Identification of Fish Toxic and Non-Toxic Organic Dyes through Adsorption of Organic Dyes on Fish

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Abstract : Organic dyes are used for dyeing cotton, plastic, wool etc. The dye manufacturing and dyeing industries are releasing unused organic dyes as an effluent. Every year five billion tons of waste organic dyes are pumped into river, ocean and other water bodies. The dyes are stable and non – bio degradable. Many methods are adopted to remove the dyes from dye effluent. But, these methods are creating another environmental issue and also dye removal is not 100% successful. Identification of Human, animal and fish poisoning organic dyes are essential, to control their toxicity. In this present investigation, sardine fish is selected to identify the fish poisoning and non – poisoning organic dyes through adsorption method. The experimental conditions like contact time, temperature, dye concentration, fish powder dosage are optimized to find out the maximum toxic effect of organic dyes on fish. The poisoning effect has been evaluated by adsorption thermodynamics, kinetics and isotherms.

Keywords : Sardine fish, Toxicity, Adsorption, Organic dyes.

Chellapandian Kannan *et al* /International Journal of ChemTech Research, 2018,11(08): 89-97.

DOI= <http://dx.doi.org/10.20902/IJCTR.2018.110810>
