STUDIES ON THE REMOVAL OF ORGANIC DYES FROM SOIL. Neel R Nabar, Dean F. Martin. Department of chemistry, University of South Florida, 4202 E. Fowler Ave CHE205, Tampa, FL 33620.

Vast amounts of chemical dyes (around 10^6 tons) are made annually worldwide. Dye effluents make their way into runoff and wastewater, eventually settling in soil. Previous extraction methods, including electrochemical methods using Fenton's reagent, have had limited success and are not cost efficient. We examined the efficacy of dye removal using a kaolin-clay model for soil and Lissamine Green B (LGB) dye. The removal of LGB from a LGB/kaolin mixture was recorded after a 24 hour extraction with hot water using a Soxhlet apparatus. Previously, aqueous LGB removal was achieved using column chromatography with commercially available Octolig®, a polyethyldiamine molecule attached to a high surface area silica gel. The results indicated 100% removal of LGB from kaolin using successive 24-hour Soxhlet extractions. Removal of dyes using hot water and/or chromatography with Octolig® could provide a safe, large-scale solution to treating soils contaminated with dyes or other organics with suitable functional groups.