**Abstract**

Goat Dung Activated Carbon-Cobalt Ferrite Magnetic Composite (GDACCFMC)synthesized by auto-combustion method is employed for the removal Reactive Red 152 (RR152) from aqueous solutions. The surface characteristics are analyzed by SEM, EDAX, BET and BJH techniques. The magnetic property of GDAC-CFMC is characterized by using vibrating sample magnetometer (VSM) equipment. Batch equilibration experiments are performed to study the influence of operating factors viz., varying initial dye concentrations, doses of sorbent materials, preset time intervals and variable pH environments to optimize the conditions in exploring the better sorptive nature of GDAC-CFMC, favoured at acidic pH. The adsorption data fits well with Freundlich isothermal model supporting multilayer sorption. The present work concludes that GDAC-CFMC is as potential material for trapping the dye molecules.