

Supplementary figures for the Manuscript

**Preparation and characterization of an algal-based magnetic
biochar nanocomposite for the removal of azocarmine G2 dye
from aqueous solutions**

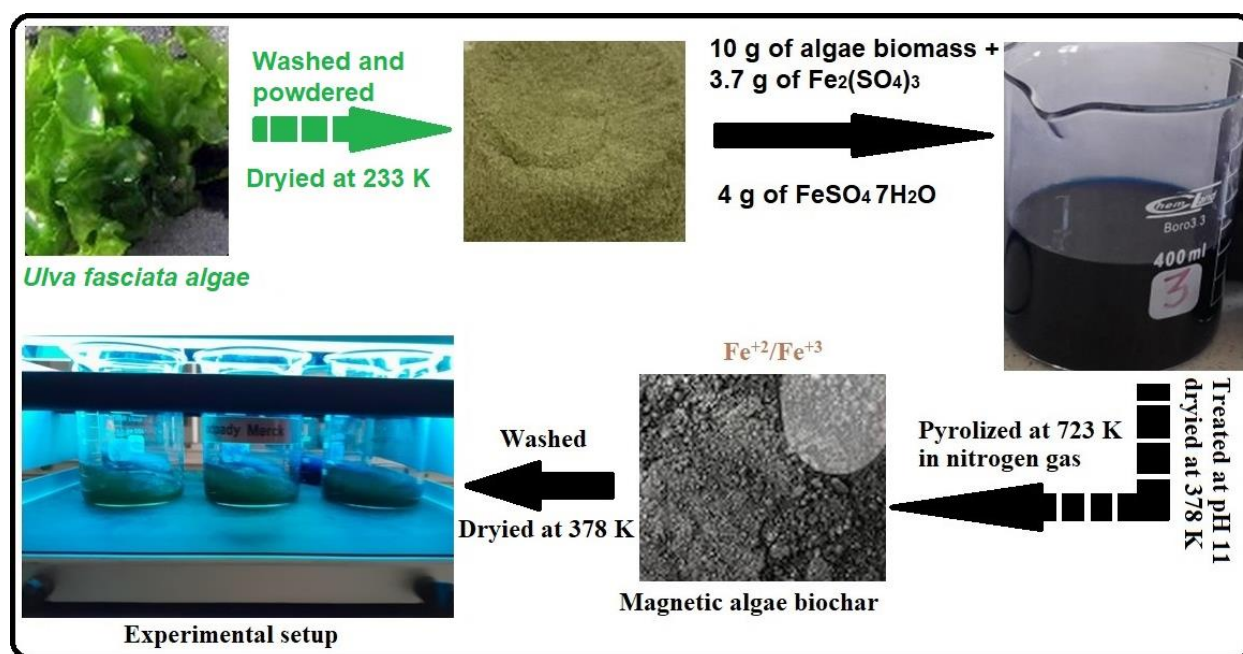


Fig S 1: Preparation of magnetic biochar $\text{Fe}_3\text{O}_4@\text{BC}$ nanocomposites

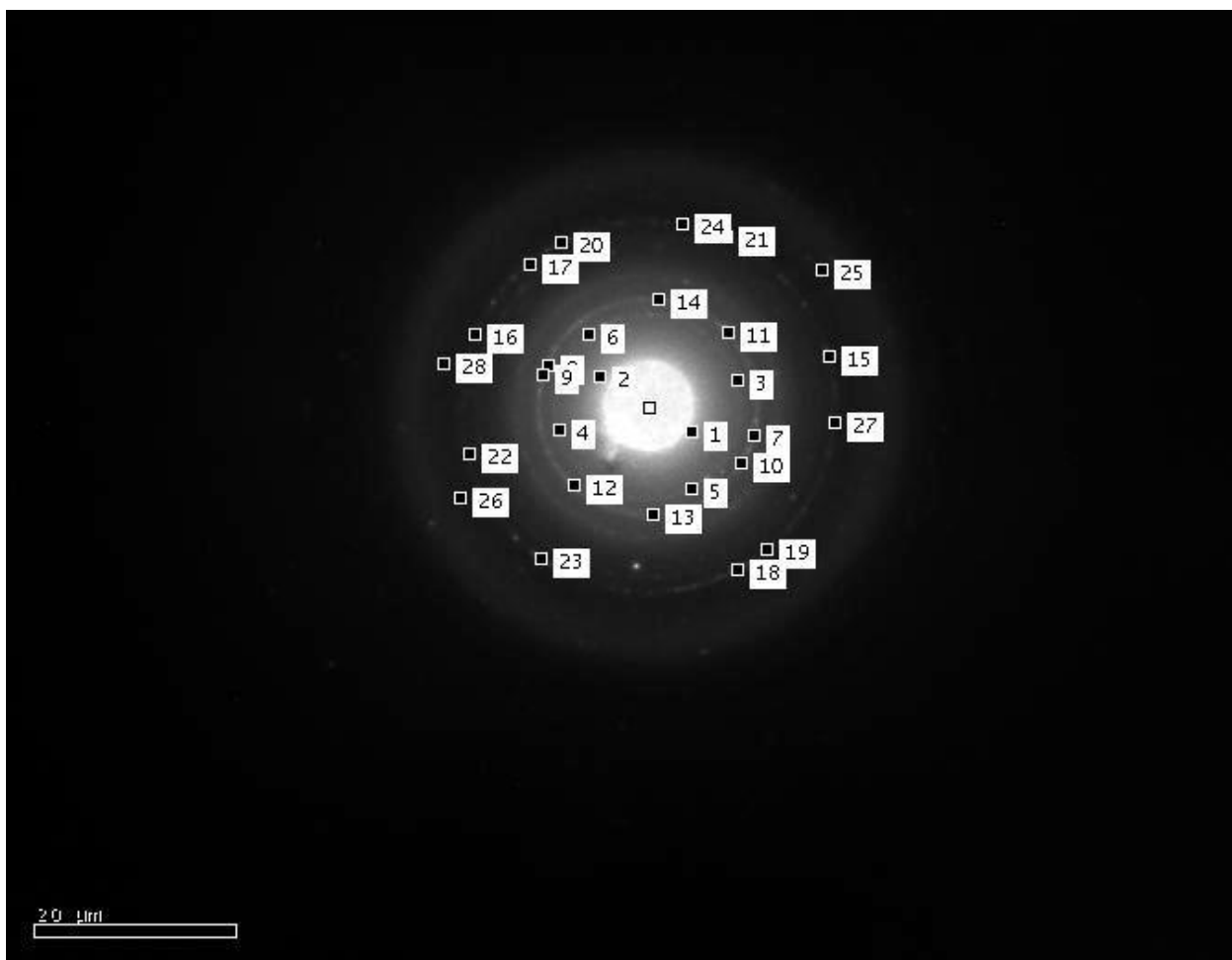


Figure S 2: Selective area electron diffraction (SAED) analysis of Fe₃O₄@BC

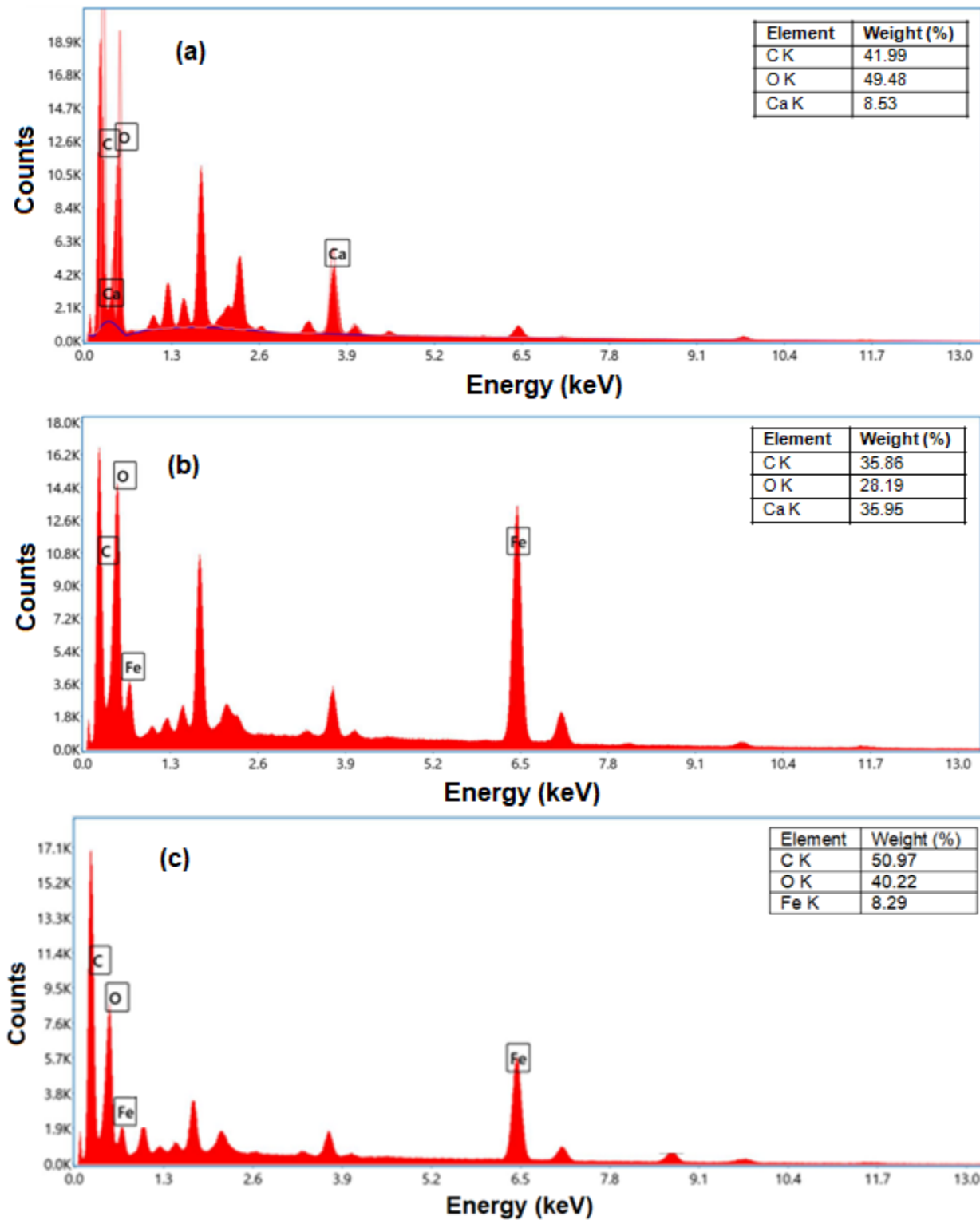


Figure S 3: EDX analysis of (a) BC, (b) Fe₃O₄@BC, and (c) Fe₃O₄@BC-ACG2

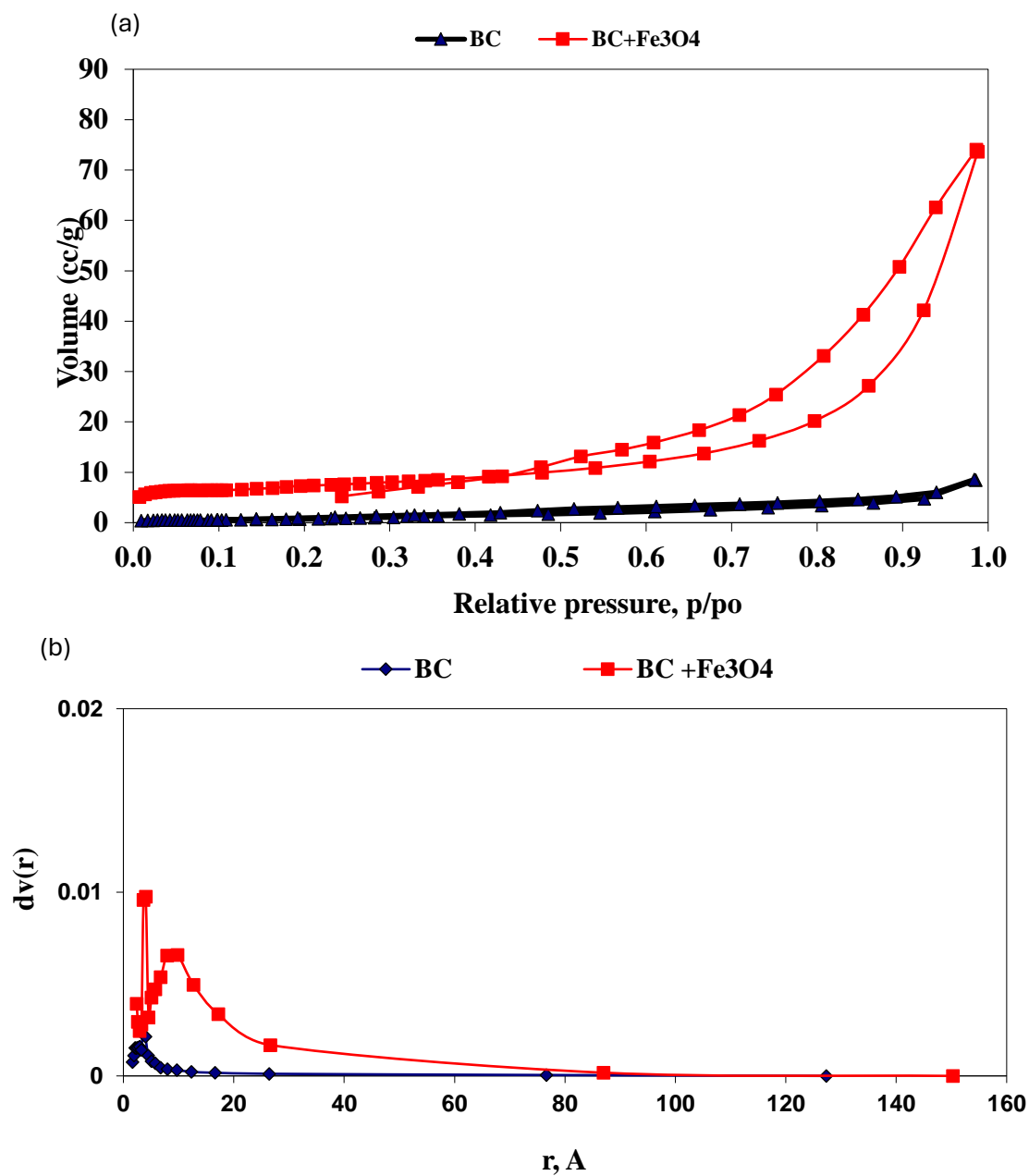


Figure S4: (a) N₂ adsorption–desorption isotherms of BC and Fe₃O₄@BC ; (b) BJH results obtained for BC and Fe₃O₄@BC

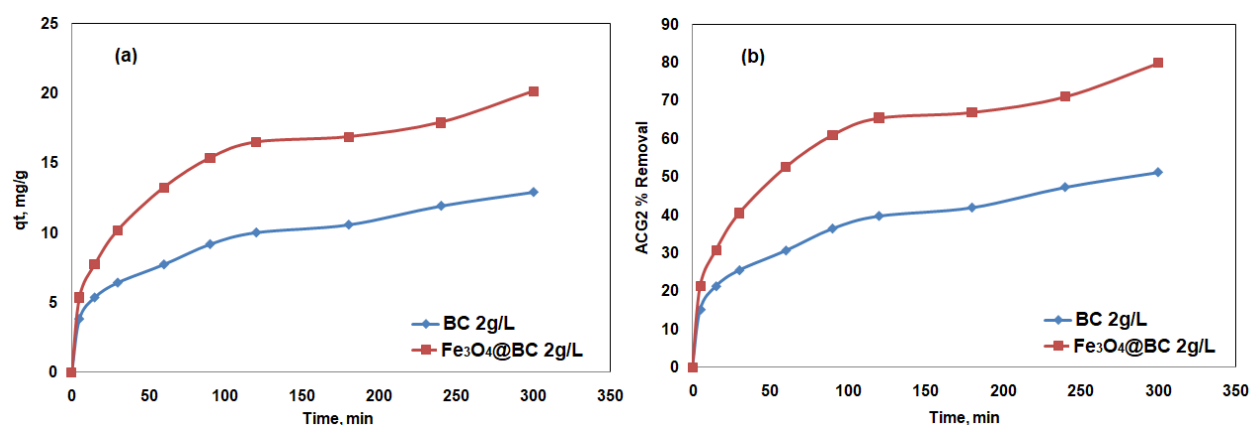


Figure S 5: Effect of time on adsorption of ACG2 on BC and $\text{Fe}_3\text{O}_4@\text{BC}$

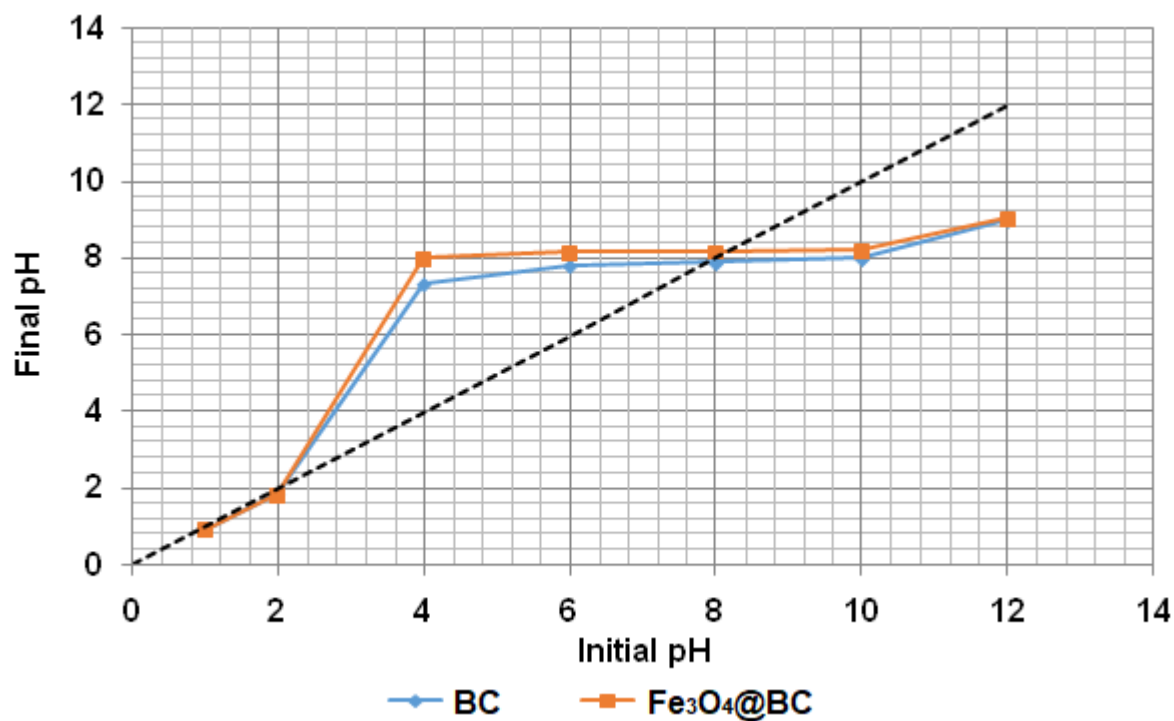


Figure S 6: pH PZC of adsorbents BC and $\text{Fe}_3\text{O}_4@\text{BC}$

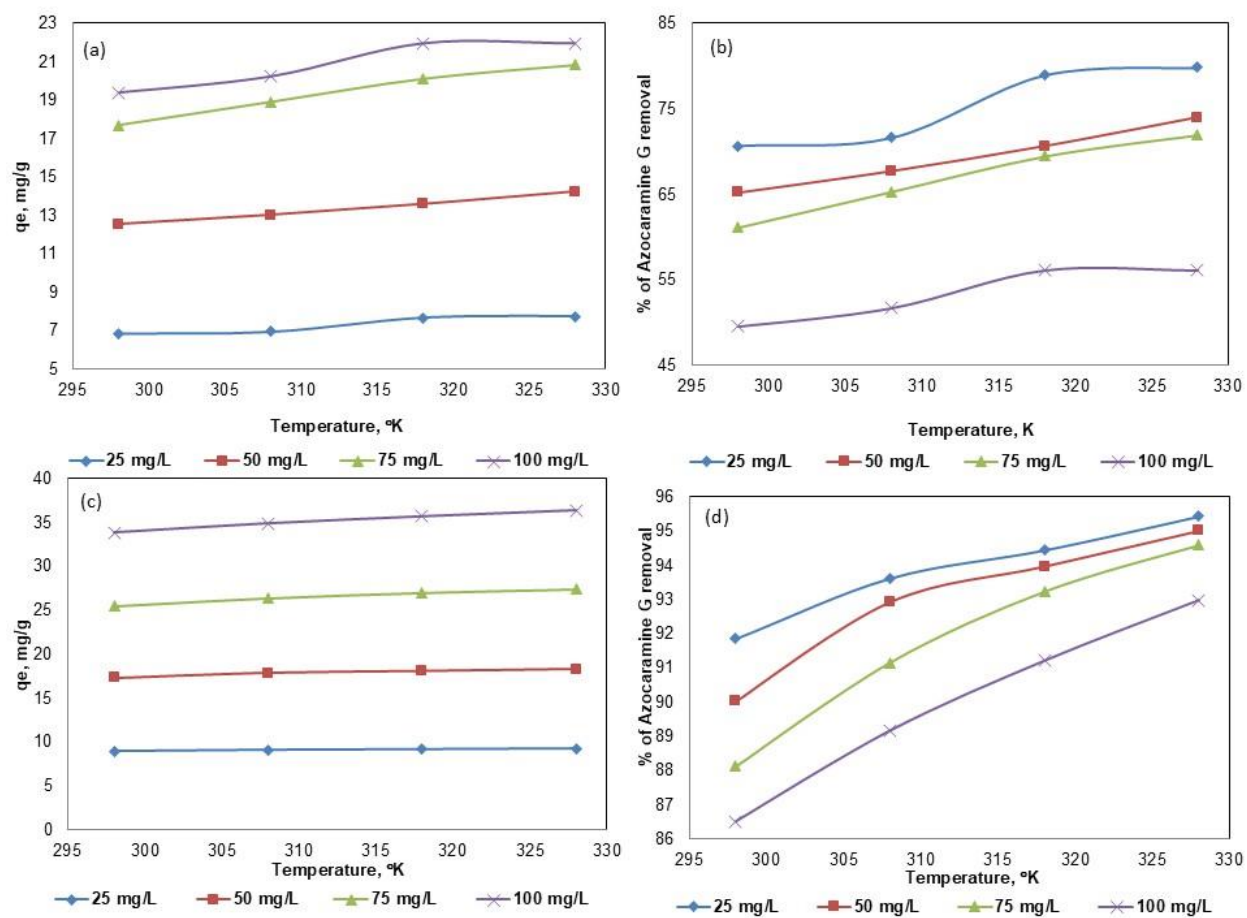


Figure S 7: Effect of temperature on adsorption of ACG2 on BC (a,b) and Fe₃O₄@BC (c,d)

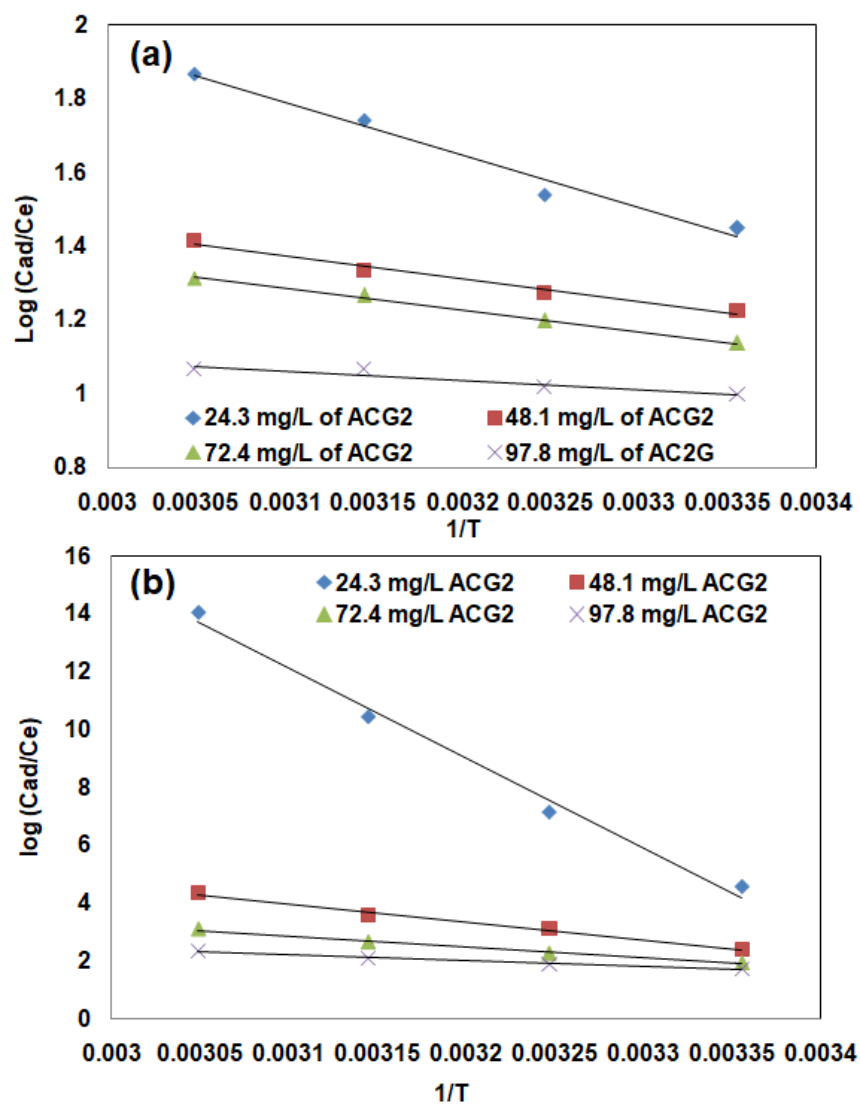


Figure S 8. Van't Hof plot of adsorption of ACG2 on BC (a) and Fe₃O₄@BC (b) adsorbents

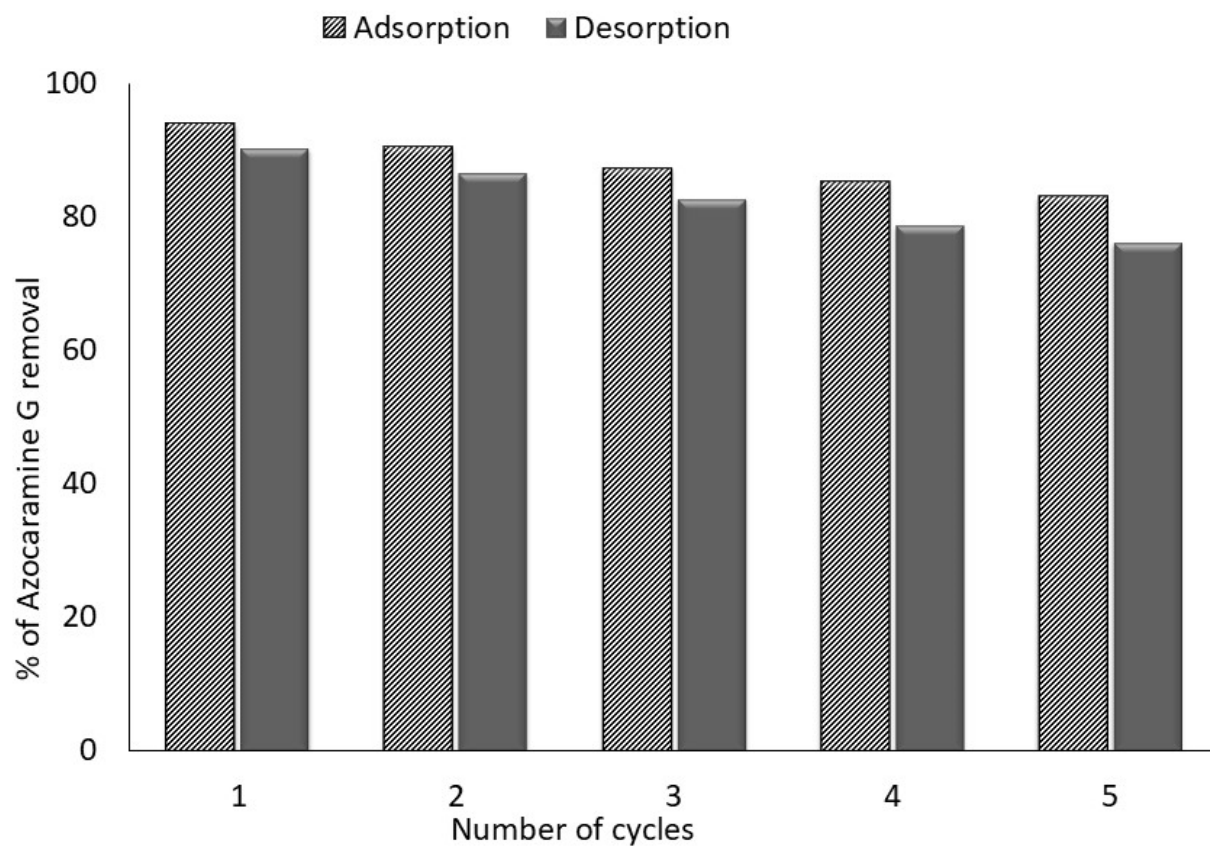


Figure S 9. Percentage adsorption of ACG2 at different reusability cycles $\text{Fe}_3\text{O}_4@\text{BC}$