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Title: Investigation of the effect of magnetic particles on the Crystal Violet adsorption onto a novel nanocomposite based on κ -carrageenan-g-poly(methacrylic acid)

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Highlights

- A novel nanocomposite hydrogel prepared by incorporating Fe_3O_4 nanoparticles.
- The adsorbent was characterized by FT-IR, XRD, SEM, TEM and VSM.
- Synthesized nanocomposite was used to adsorb CV dye in aqueous solution.
- The second-order model can describe the kinetics of adsorption capacity of hydrogel.
- Langmuir isotherm for equilibrium adsorption data fitted well.

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