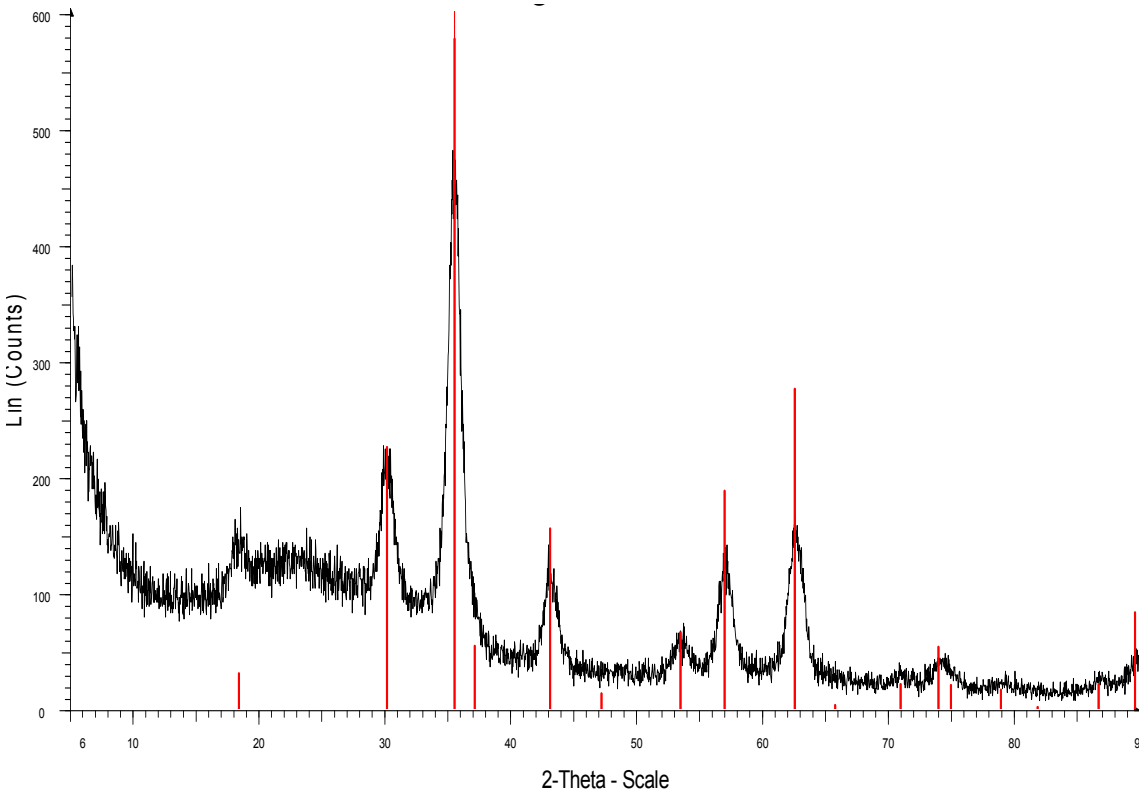

Figure S1. XRPD spectrum of magnetite nanoparticles. The peaks assigned to Fe_3O_4 are marked with red lines.

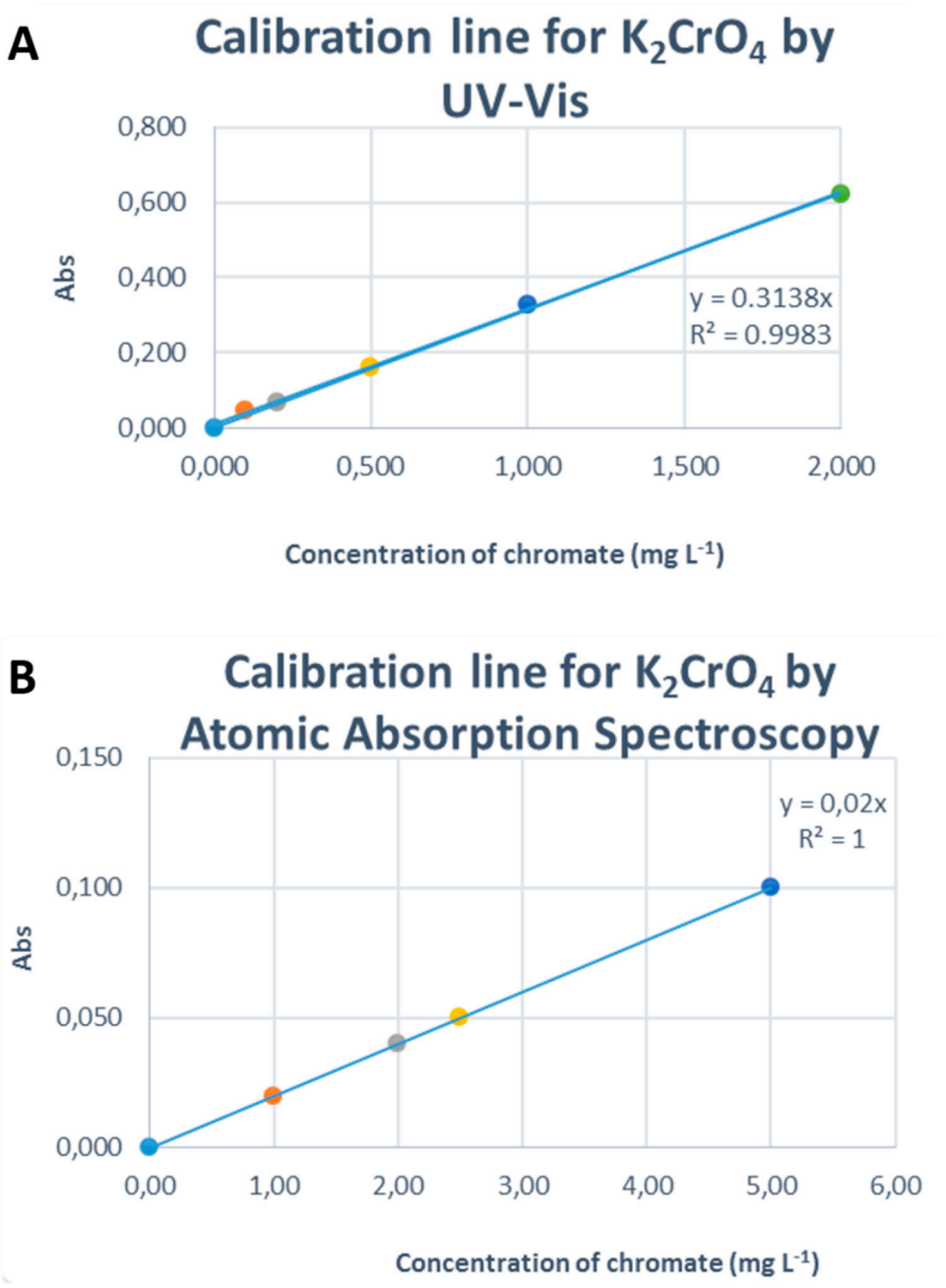

Figure S2. Calibration lines for chromate by a) UV-vis, b) AAS.

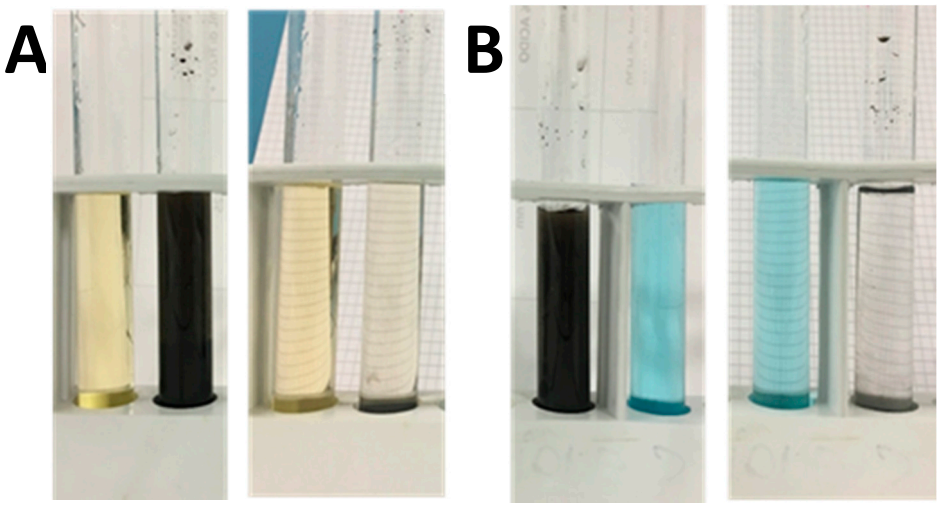

Figure S3. Pictures showing the appearance of dye solutions before and after treatment with the magnetite-carbon composite: a) methyl orange, b) methylene blue.

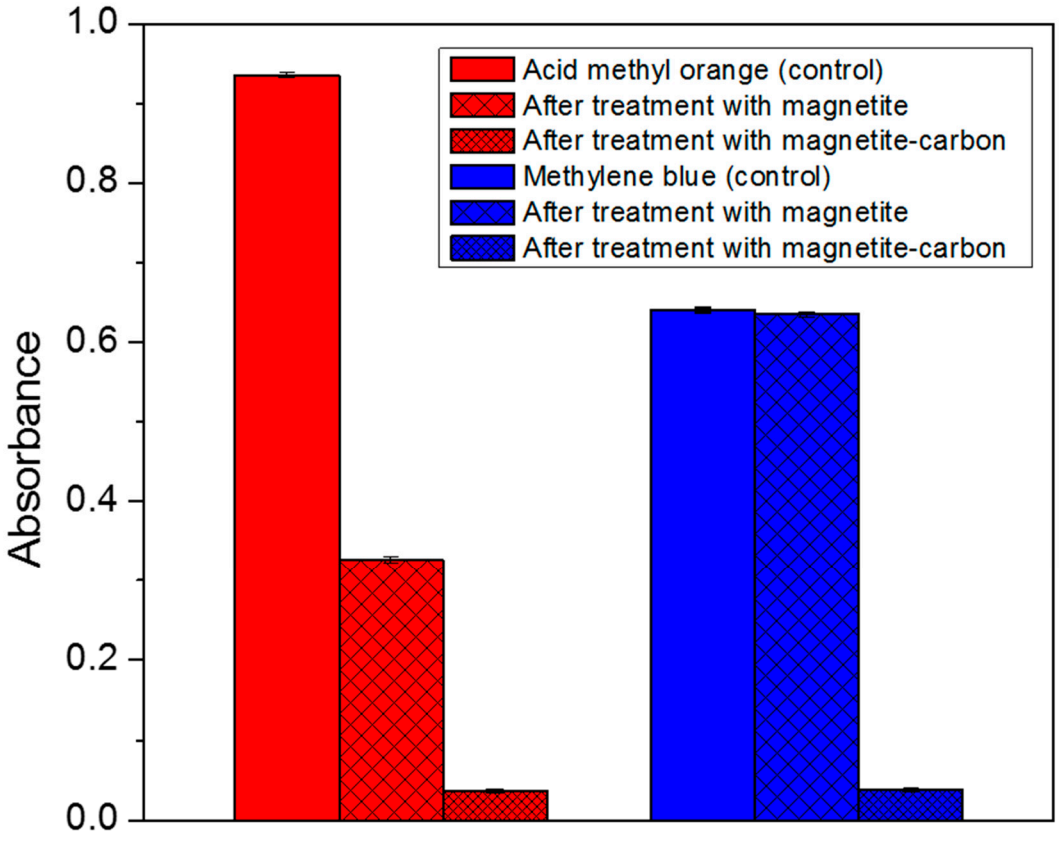

Figure S4. Reproducibility test for the removal efficiency of the magnetite-carbon nanocomposite. The results are the average of three different measurements. Conditions: 0.05 mg of dye, 0.24 g of particles, 10 mL water, contact time 10 min.

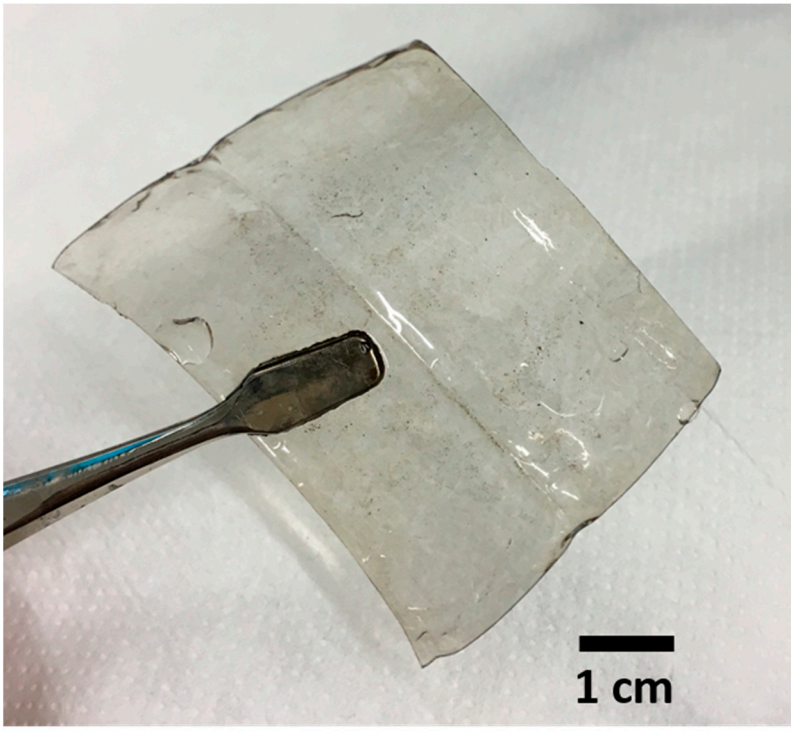

Figure S5. A piece of the water purification device showing its transparency after aminolysis and decoration with the magnetite-carbon nanocomposite. The picture also demonstrates that the nanocomposite is evenly distributed on the plastic surface.