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Title: Single and binary adsorption of azo and anthraquinone dyes by chitosan-based hydrogel: Selectivity factor and Box-Behnken process design

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HIGHLIGHTS

- Synthesized hydrogel (SAH) evaluated for dye adsorption in a binary system.
- SAH adsorption was optimized using Box-Behnken methodology.
- The mechanism regarding SAH adsorption for binary dye system was explored.
- Mathematical models were applied to describe the adsorption process.
- Selectivity factor introduced to describe the binary system during adsorption.

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