STUDIES ON THE ADSORPTION OF C-PHYCOCYANIN FROM *Spirulina platensis* ONTO TWO EXPANDED BED ION EXCHANGE RESIN

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C-phycocyanin (C-PC), a blue dye extracted from some cyanobacteria, is of great importance since it has various medical and pharmacological properties, which have therapeutic value due to their protective effect and anticarcinogenic antioxidative and anti-inflammatory activities and for the treatment of Alzheimer’s and Parkinson’s disease, making it important the study of their purification. The comparative of adsorption of C-PC from cyanobacteria *Spirulina platensis* directly onto two ion exchange resin from a clarified crude extract was investigated in this work. The clarified crude extract was used for kinetic studies and for the adsorption isotherm of C-PC onto both ion exchange resin. The trials were carried out at pH 7.5 and 25°C in stirred tank reactors containing diluted solution of C-PC and Streamline DEAE or Streamline Q XL, when was used Streamline DEAE, the equilibrium was obtained at 120 minutes, and for Streamline Q XL at 80 minutes from experiment beginning. It was observed that the adsorption isotherm of C-phycocyanin on both resin, showed a good fit to the Langmuir model (R=0.97). The qm and Kd values (maximum adsorption capacity and equilibrium constant, respectively) to Streamline DEAE were estimated by the linear isotherm equation, and were 34.5 mg/mL and 0.097 mg/mL, respectively. When was used Streamline Q XL, qm was 36.2 mg/mL and Kd was 0.14 mg/mL, thus, the Streamline DEAE resin was the resin with the highest affinity for the protein studied, as shown by the Kd values. Acknowledgments: Capes, CNPq and FAPERGS.