

P 22. REMOVAL OF METHYLENE BLUE FROM WATER BY USING CHITOSAN-CARBON BASED COMPOSITE MEMBRANES

Enes Furkan Şimşek¹, Ömer Kazak¹, Ali Tor¹

¹ *Department of Environmental Engineering, Necmettin Erbakan University, Konya, Turkey.*

E-mail: efurkansimsek07@gmail.com, okazak@erbakan.edu.tr, ator@erbakan.edu.tr

ABSTRACT: Chitosan and its modified forms are widely used for the removal of contaminants from aqueous solutions due to their several advantages such as being biocompatible and biodegradable, non-toxic and having a suitable hydrophilic property. In this study, a vinasse based biochar-chitosan composite membrane was prepared and its potential for the removal of methylene blue from aqueous solution was investigated. For this purpose, composite membranes were prepared by using different amount of biochar and chitosan dissolved in 1% (v/v) acetic acid and FT-IR, SEM and TGA techniques were used for their characterization. It was shown that the resulting membranes could be successfully used for the removal of methylene blue from aqueous solution.

Keywords: Chitosan, Vinasse, Biochar, Composite membrane, Methylene blue