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## Separation of proteins using electromembrane

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This paper reports an experimental investigation carried out to evaluate the physical optimal conditions to remove CO2 in the absorption column. Amino acid like glycine separated from plant was used as non-aqueous solution via chemical neutralization. The results show that a non-aqueous solution containing amino acid like glycine separated with spinach plant was obtained using electromembrane technology and it might be helpful for the biological removal of CO2 in a column packed with Raschig rings. The electromembrane process shows how the filtration time is reduced by the use of an electric field. The transmembrane pressure (TMP) was reduced by 20% in a particular electric field the hydraulic filtration using an electric field provides another substitute to the crossflow filtration in the separation of amino acid. The conventional filtration theory was also used in order to determine the permeate rate and the resistance of the fouling-layer in the membrane. From the experimental results, the transmembrane pressure (TMP) was reduced by 20% as the electric field increased. The resistance (Rm) of the membrane process in an electric field was reduced by over 200% in comparison with anno-electric field. And the absorbent of amino acid achieved a removal efficiency of 12% by itself. However, the removal efficiency was increased to 71% using complex absorbent mixed with 5.0% of an amine chemical. The mass transfer model was used for the interpretation of the experimental data. The order of reaction mixed with respect to ethanol amine was found to be increased from 0.6 to 1 with reaction order of water and extracted material mixed with an ethanol amine.

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