

LYSOZYME SEPARATION BY MP500 MIXED MATRIX MEMBRANE

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Abstract

Rapid developments in biotechnology increase the demand to separate biomolecules using mild process conditions. The separation of lysozyme by mixed matrix membrane adsorbers was studied. MP500, a strong anion exchange resin is incorporated as adsorbent into an EVAL polymeric matrix. The membranes in this study are prepared by immersion precipitation out of a DMSO solution containing 14% EVAL. All membranes contain 65% resin based on dry solids. The morphology of the membranes are characterized using scanning electron microscopy. Dynamic adsorption capacities of lysozyme onto mixed matrix membrane adsorbers are measured. The dynamic lysozyme adsorption capacity at 10% break through is determined as 43 mg lysozyme/g membrane.

Keywords: MP500, adsorption, mixed matrix membrane, lysozyme