Hybrid immobilization of microorganisms for biological denitrification

송승훈, 유영제*
서울대학교
(yjyoo@snu.ac.kr*)

A novel hybrid immobilization method of microorganisms was developed based on entrapment and encapsulation. The encapsulation technique was applied to the entrapment method with polyvinyl alcohol. For the hybrid method, some additives such as xanthan gum and surfactant were used and the previous method of polyvinyl alcohol entrapment was modified. The hybrid immobilization increased the cell loading and decreased the cell leakage from beads. Microorganism, *Ochrobactrum anthropi* SY509, immobilized by hybrid method was used in denitrification of wastewater. The effects of cell loading of beads and immobilization conditions on denitrification were examined. The denitrification efficiency of immobilized cells by the hybrid method was higher than that of the free cells and the entrapped cells. The details will be discussed.