

Preparation of Silver Ion Immobilized Microspheres and Their Efficiency for Disinfection

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Storing water in silver vessels or less than 10ppm AgNO₃ in aqueous solution are recently focused to destroy the bacteria in the water. In this research, the silver ions were immobilized by two ways. One was silver-containing silica gel by sol-gel method. The other was silver-containing hollow microsphere by emulsion/extraction method. Microstructures and properties of Ag⁺ immobilized particles were analyzed and the dissolving characteristics of Ag⁺ immobilized ions were examined. Both immobilized silver ions were testified to have good chemical durability and ideal releasing characteristics. these two materials were prepared in the optimal processing conditions and proved having good efficiency for disinfecting E. coli.