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Antibacterial Properties of the Nanoparticles with the Zinc Sulfide Quantum Dots

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Synthesis of the nanoparticles based on ZnS quantum dots, which were incorporated into the natural alginate (Alg) polymer, has been conducted. The sample synthesis was using the method of chemical base deposition from an aqueous solution. Analysis of the morphological characteristics and chemical composition of the obtained ZnS-Alg nanocomposite has confirmed the creation of nanoparticles with the specified physicochemical properties. The ZnS-Alg composite sample has showed the high antibacterial activity towards *Peptostreptococcus anaerobius*, *Streptococcus pyogenes*, *Bacteroides fragilis*, *Escherichia coli* and *Klebsiella pneumoniae*.