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(57) Abstract :
Disclosed herein is a biocompatible nanoparticle (200) having antibacterial activity, comprising alexidine dihydrochloride (201) as a cationic biguanide compound (101) to serve as a core of the biocompatible nanoparticle (200) to provide antibacterial properties, sodium tripolyphosphate (203) as a multivalent anionic crosslinking agent (103) complexed with alexidine dihydrochloride (201) core to provide cross-linking and structural stability, and poly(oxyethylene)-poly(oxypropylene)-poly(oxyethylene) triblock copolymer (poloxamer-188) (205) as a steric stabilizer (105) disposed on the surface of the nanoparticle (200) for enhanced dispersion.

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