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Struvite removal using ultasonic system

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Curcumin is a naturally occurring hydrophobic polyphenol compound. It exhibits a wide range of biological activities such as antibacterial, anti-inflammatory, anti-carcinogenic, antifungal, anti-HIV, and antimicrobial activity. In this research work, antimicrobial curcumin nanofibrous membranes are produced by electrospinning technique using the Eudragit RS 100 (C19H34ClNO6) polymer solution and curcumin. The morphology and chemistry of the membrane are analyzed using Scanning Electron Microscopy (SEM) and Fourier-Transform Infrared (FTIR) Spectroscopy. Kirby Bauer disk diffusion tests are carried out to examine the antibacterial effectiveness of the membrane. Experimental results show that the nanofibers produced are of uniform thickness morphology and curcumin is successfully incorporated into the nanofibrous mat while no chemical bonding was observed between curcumin and the polymer. The antimicrobial curcumin nanofibrous membranes can be effectively applied as antimicrobial barrier in a wide variety of medical applications such as wound healing, scaffolds and tissue engineering.

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