Electronic Supplementary Material (ESI) for Journal of Materials Chemistry B.

Supporting Information

Investigation of antibacterial properties of hyaluronic acid microneedles based on chitosan and MoS_2

Wenzhen Du,[a] Xiaodan Li,[a] Manyue Zhang,[a] Guixia Ling,[a,*] Peng Zhang [a,*]

[a] Wuya College of Innovation, Shenyang Pharmaceutical University, No. 103, Wenhua Road, Shenyang 110016, China.[1]

[*] Corresponding author. zhangpengspu@163.com (Peng Zhang); pharlab@163.com (Guixia Ling).

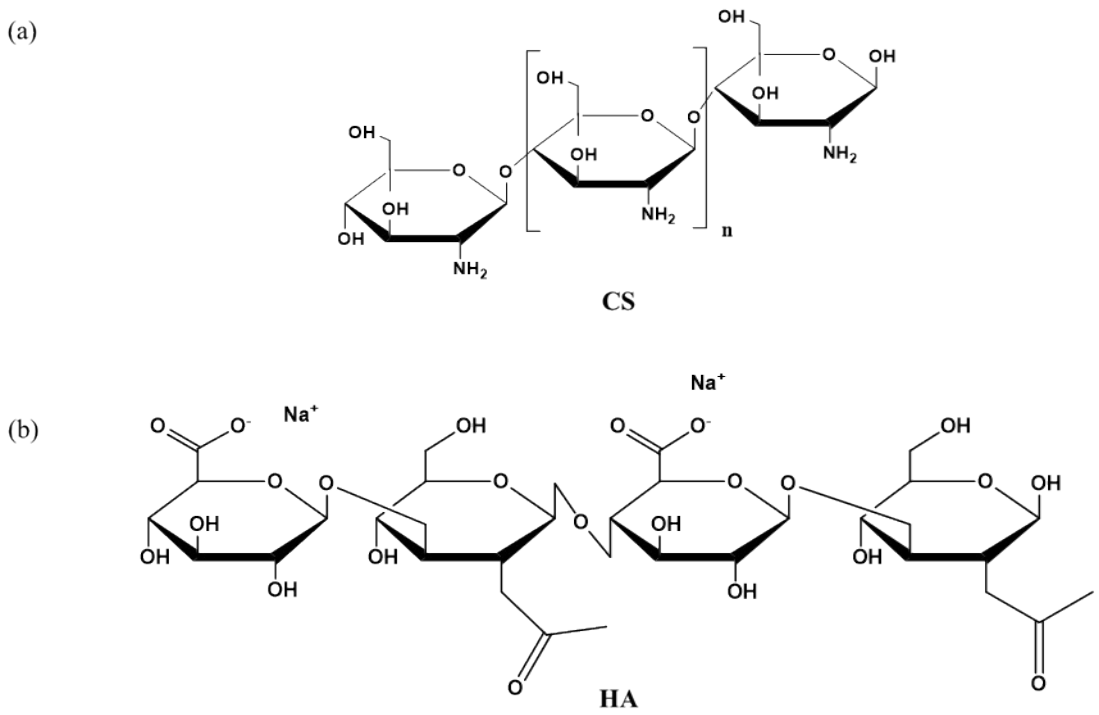

Fig. S1. The chemical structure of Chitosan (CS) (a) and Hyaluronic acid (HA) (b).

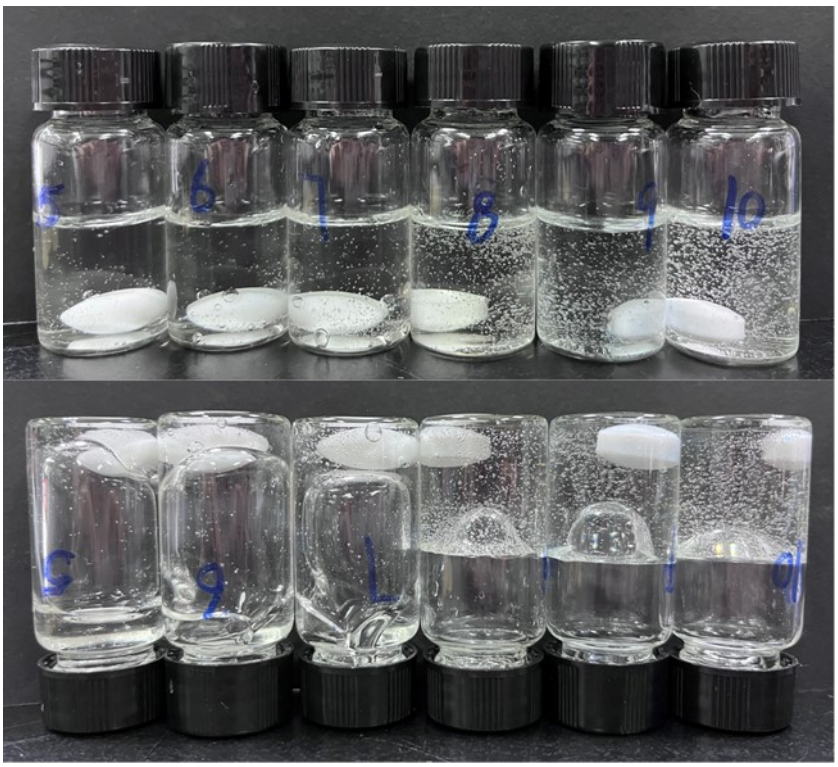

Fig. S2. Mobility comparison of different concentrations of HA (from left to right, the concentrations of HA are 5%-10% respectively).

PVP \ HA(%)	5	6	7	8	9	10
5	-	-	±	+	+	+
6	-	-	-	±	+	+
7	\	\	\	\	±	+
8	\	\	\	\	\	±
9	\	\	\	\	\	\
10	\	\	\	\	\	\

Fig. S3. Brittleness screening of MN prescriptions. (- means the experimental group with greater brittleness; ± means the experimental group with a certain brittleness; + means the experimental group with less brittleness; \ means the experimental group was excluded during the experiment).

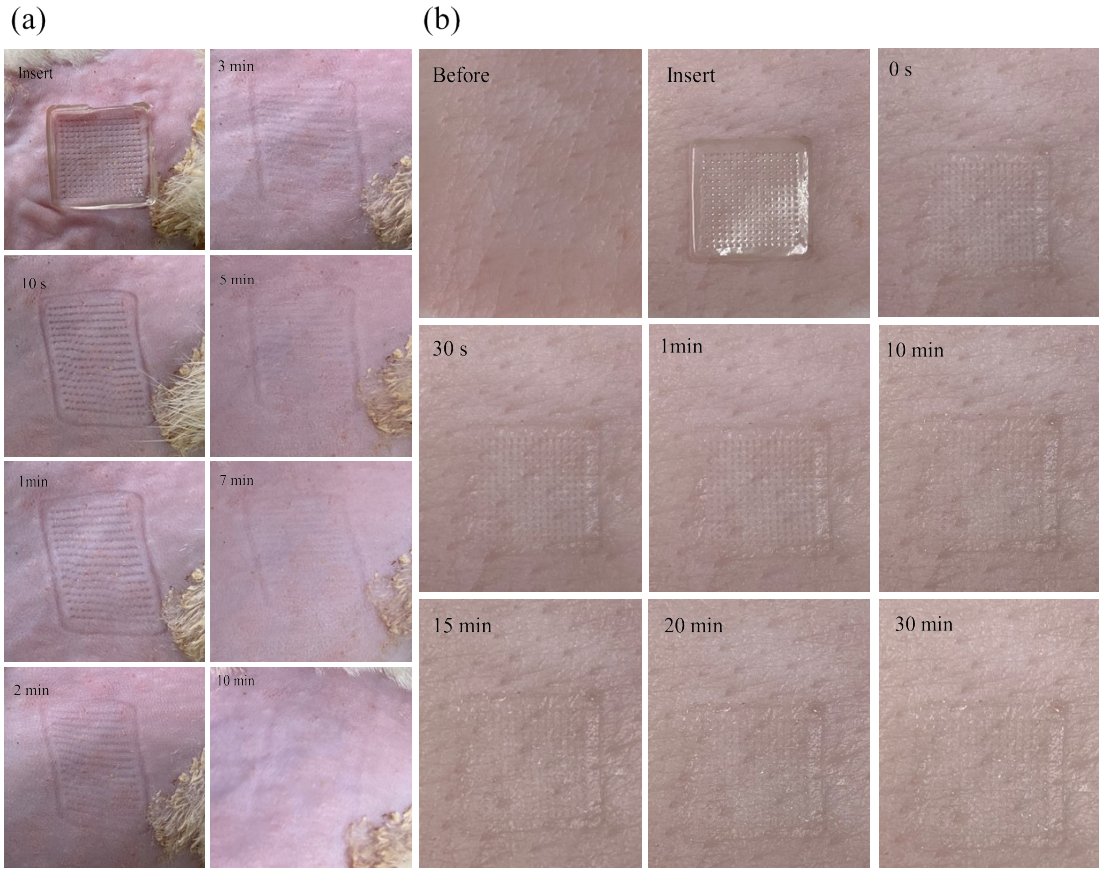

Fig. S4. Skin recovery of rats after MN insertion (a); skin recovery of isolated porcine skin after MN insertion (b).

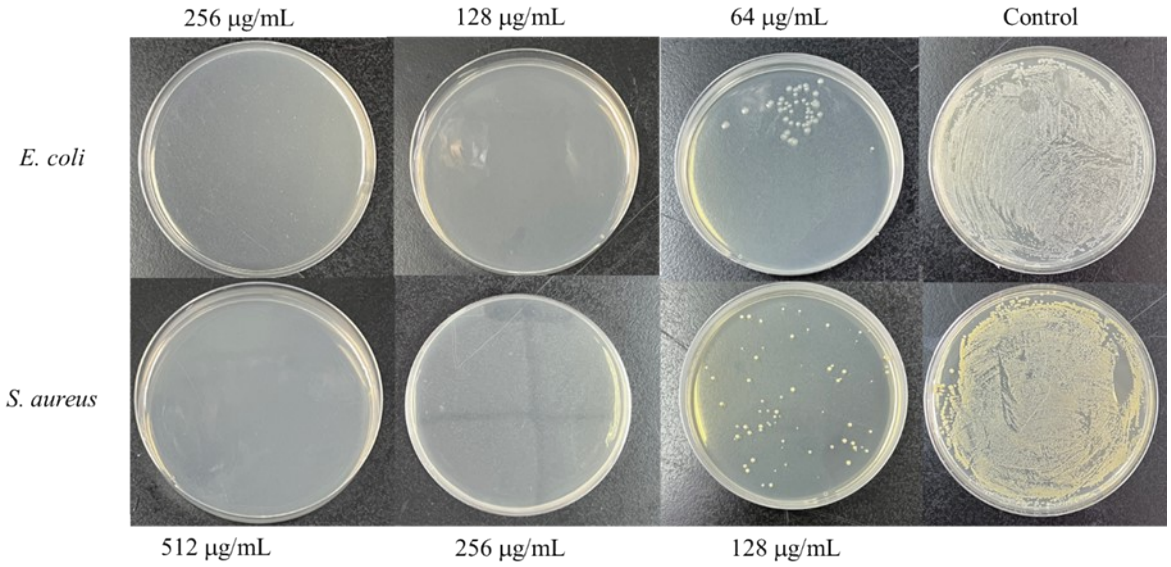

Fig. S5. Schematic diagram of MBC of *E. coli* and *S. aureus*.