

Supplementary Materials

N-Halamine Biocidal Materials with Superior Antimicrobial Efficacies for Wound Dressings

Buket Demir ¹, Roy M. Broughton ², Mingyu Qiao ³, Tung-Shi. Huang ³, S. D. Worley ^{1,*}

¹ Department of Chemistry and Biochemistry, Auburn University, Auburn, AL 36849; bzd0003@tigermail.auburn.edu (B. D.); worlesd@auburn.edu (S.D.W.)

² Center for Polymers and Advanced Composites, Department of Mechanical Engineering, Auburn University, Auburn, AL, 36849; brougrm@auburn.edu (R.M.B.)

³ Department of Poultry Science, Auburn University, Auburn, AL, 36849; huangtu@auburn.edu (T-S. H.); mzq0001@tigermail.auburn.edu (M. Q.)

* Correspondence: worlesd@auburn.edu (S.D.W); Tel.: +01-334-844-6980 (S.D.W.)

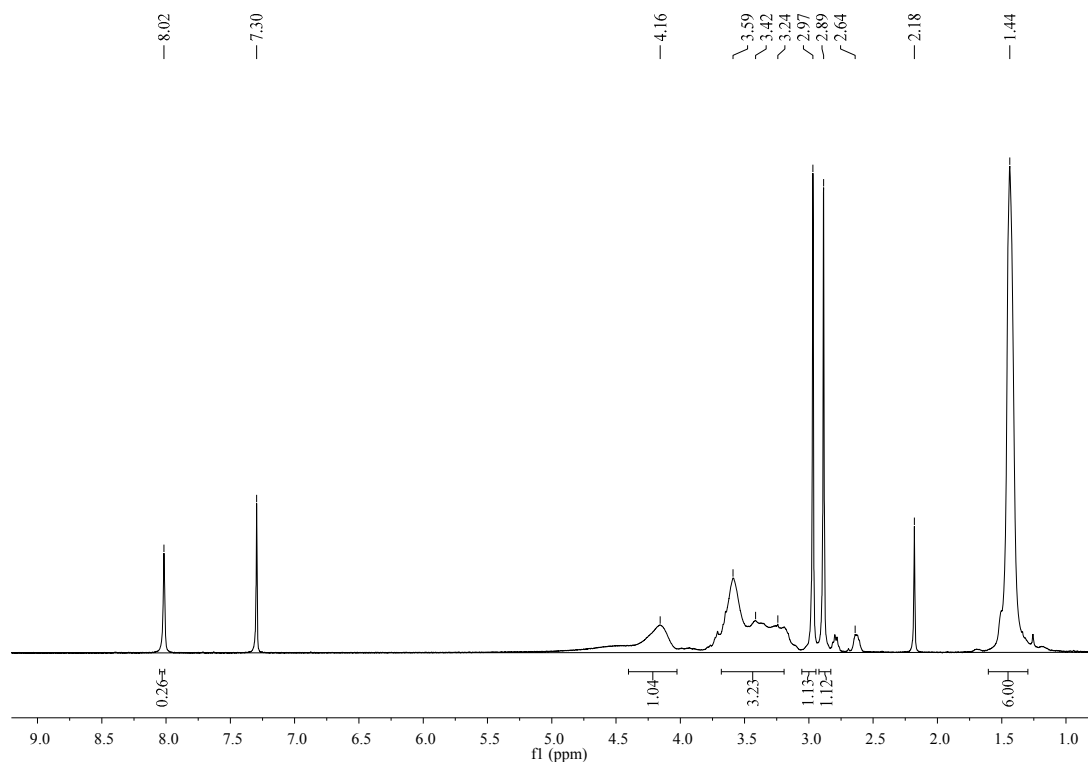


Figure S1. ¹H-NMR (d-CDCl₃) of the 3-Glycidyl-5,5-dimethylhydantoin (Hy-Ep).

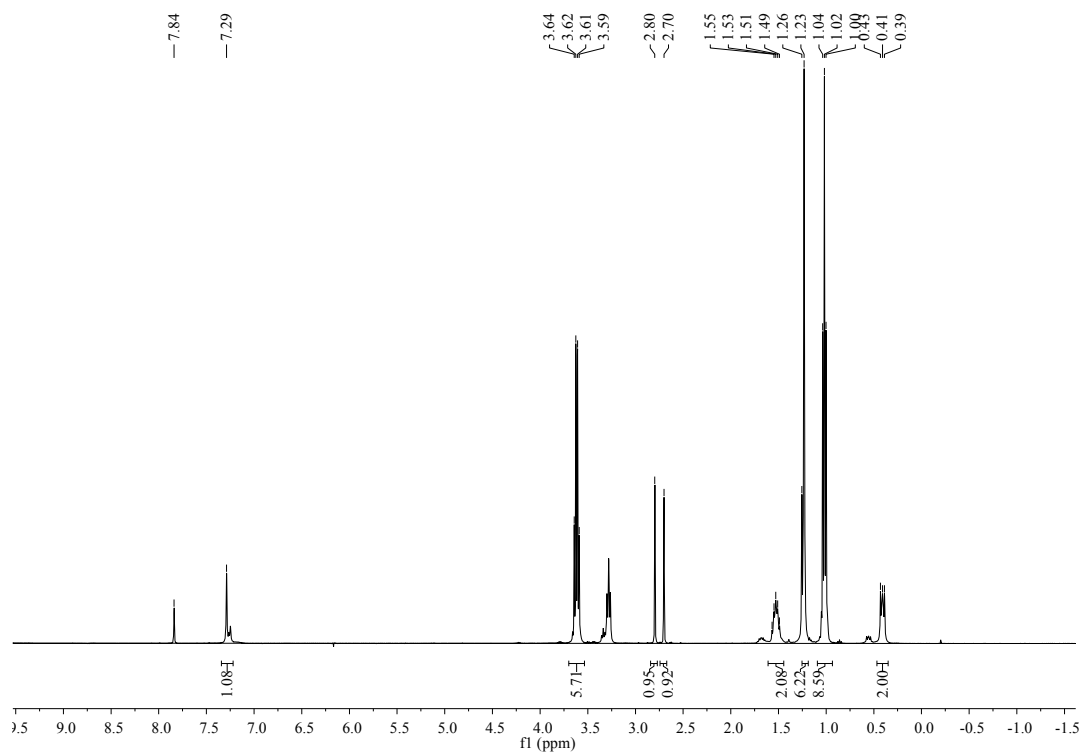


Figure S2. $^1\text{H-NMR}$ ($d\text{-CDCl}_3$) of the 3-triethoxysilylpropyl-5,5-dimethylhydantoin (BA-1).

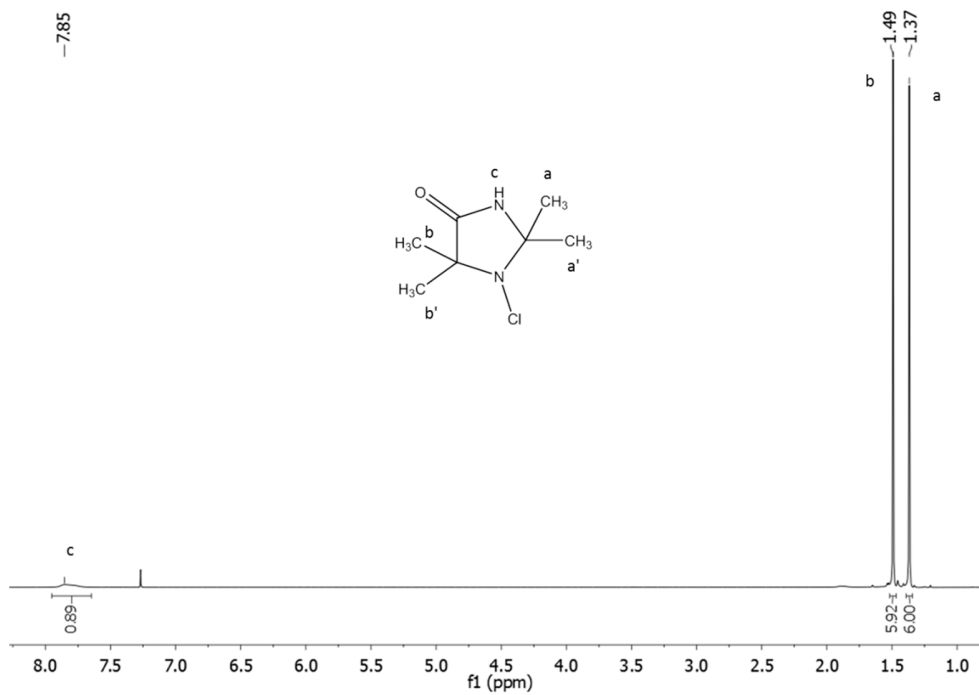


Figure S3. $^1\text{H-NMR}$ ($d\text{-CDCl}_3$) of the 1-chloro-2,2,5,5-tetramethyl-4-imidazolidinone (MC).

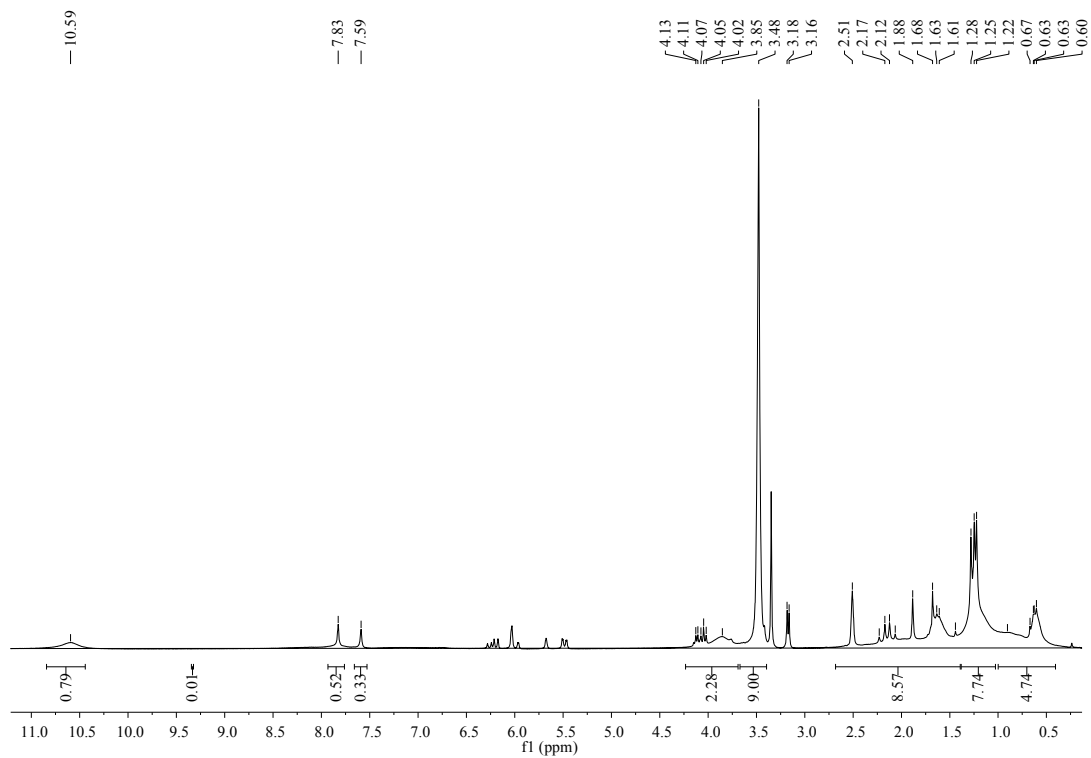


Figure S4. $^1\text{H-NMR}$ (DMSO-d_6) of the hydantoin acrylamide siloxane copolymer (HASL).

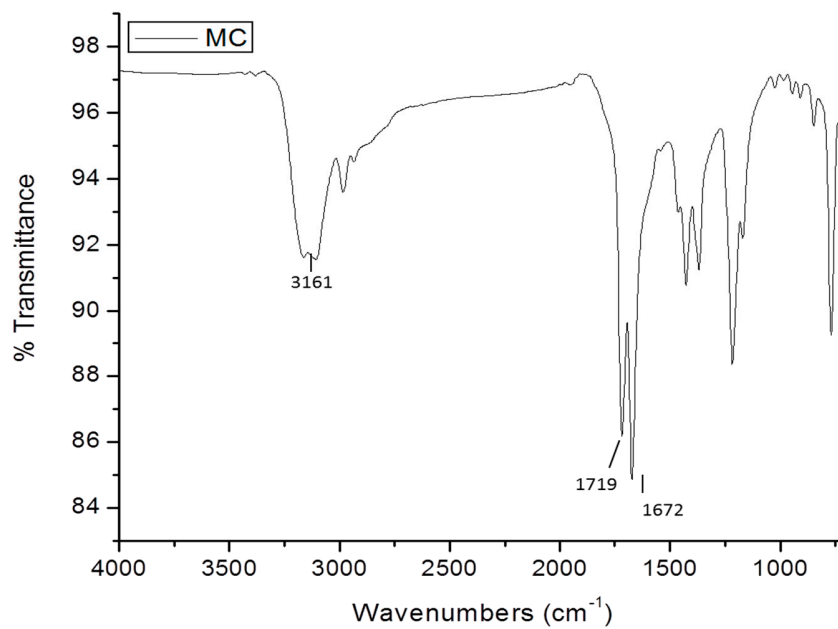


Figure S5. FTIR spectra of the 1-chloro-2,2,5,5-tetramethyl-4-imidazolidinone (MC).

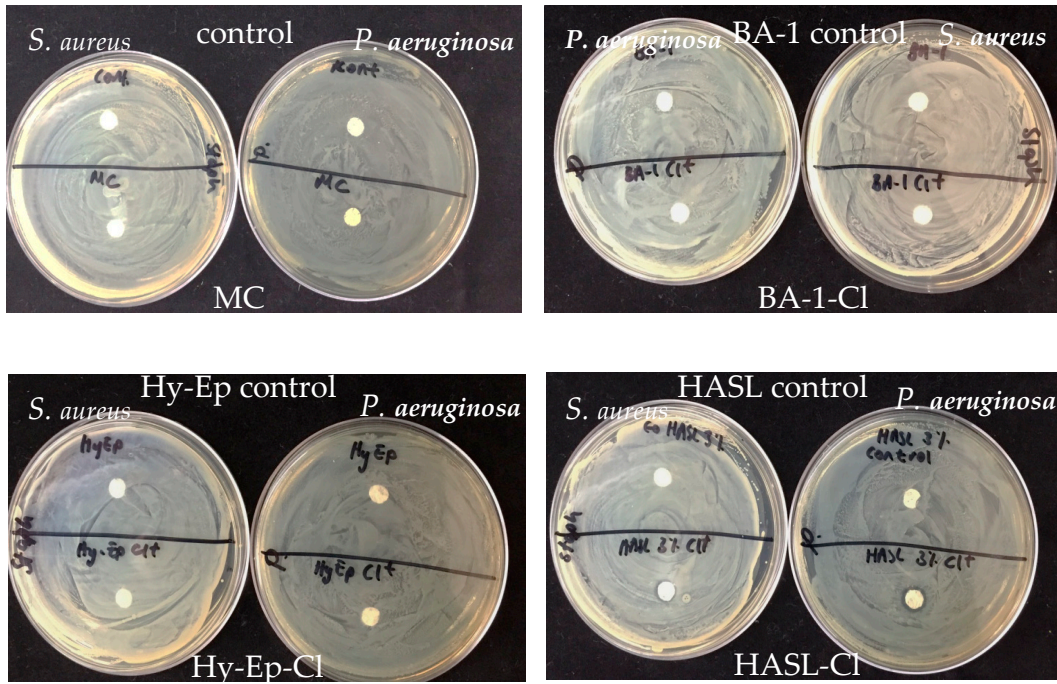


Figure S6. Zone of inhibition of a) MC b) BA-1-Cl c) Hy-Ep-Cl and d) HASL-Cl treated dressings, unchlorinated disks were shown on the top half part of each agar plate and N-halamine treated and chlorinated disks were shown on the bottom half of each agar plate against *S. aureus* (left plate) and *P. aeruginosa* (right plate).