

Supporting Information.

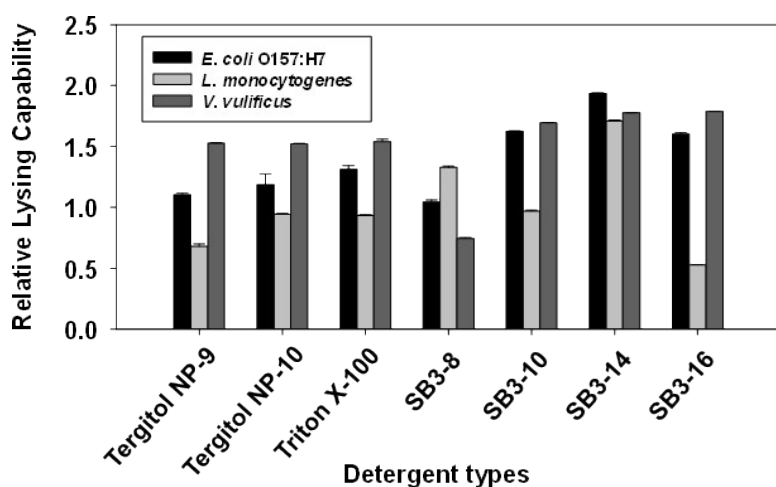


Figure S1. Types of the employed detergents as candidate lysing agent.

As candidate lysing agents, three nonionic detergents (Tergitol NP-9, Tergitol NP-10 and Triton X-100) and four zwitterionic detergents (SB3-8, SB3-10, SB3-14 and SB3-16) were employed. As shown in **Figure S1**, gram-positive *L. monocytogenes*, showed relatively lower bacteriolytic activities than the other two gram-negative strains because of distinguish envelop structure, containing rigid peptidoglycan layers¹. When it comes to ionicity, the nonionic types showed relatively lower bacteriolytic activities when compared to zwitterionic detergents of long chain length (SB3-10 to SB3-16). In particular, lytic effect of gram-positive was consistently low with all nonionic detergents. It implied that the gram-positive strain was more susceptible with ionicity of detergents. Chain length seemed to influence on bactericidal effects of gram-negative strains. Due to envelop structure mostly comprising with lipopolysaccharides membrane, such the types bacteria have sensitivity to detergents². Based on above results, we selected SB3-14 detergent as the optimal lysing condition for both gram-positive and gram-negative strains.

1. J. B. Cornett and G. D. Shockman, *Journal of bacteriology*, 1978, **135**, 153-160.
2. C. Filip, G. Fletcher, J. L. Wulff and C. Earhart, *Journal of bacteriology*, 1973, **115**, 717-722.