

Supplementary Table S1. The bacteriophage concentration in the AGI-30 impinger with different collection mediums

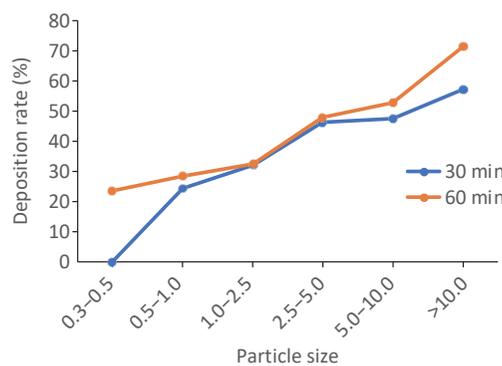
Nebulized suspension	Nebulization time	Collection medium		
		Nutrient broth	PBS	SM buffer
5.7×10^8	10	4.6×10^3	4.0×10^3	5.4×10^3
1.9×10^9	1	7.0×10^2	1.8×10^3	2.0×10^3
4.7×10^9	10	2.7×10^4	8.2×10^4	1.2×10^5

Supplementary Table S2. The bacteriophage concentration of collection medium (SM buffer) in different impinger

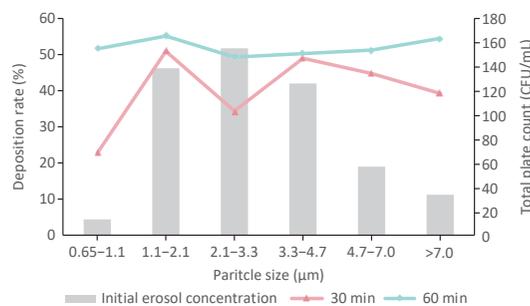
Nebulized suspension	Nebulization time	Collection medium	
		AGI	SKC
2.9×10^8	1	5.6×10^2	8.4×10^2
4.6×10^8	10	4.6×10^3	4.8×10^3
4.9×10^9	1	4.9×10^3	6.8×10^3
3.9×10^9	10	3.3×10^4	2.4×10^4

Supplementary Table S3. The number percentage of bacteriophage aerosol in difference particle size

Particle size (μm)	0.3–0.5	0.5–1	1–2.5	2.5–5	5–10	> 10
Phi-X174	55.0%	28.0%	14.4%	2.1%	0.4%	0.2%
MS2	55.5%	27.7%	14.0%	2.0%	0.5%	0.2%



Supplementary Figure S1. Deposition rate of bacteriophage aerosol particle concentration in chamber.



Supplementary Figure S2. Deposition rate of staphylococcus albus aerosol in chamber.