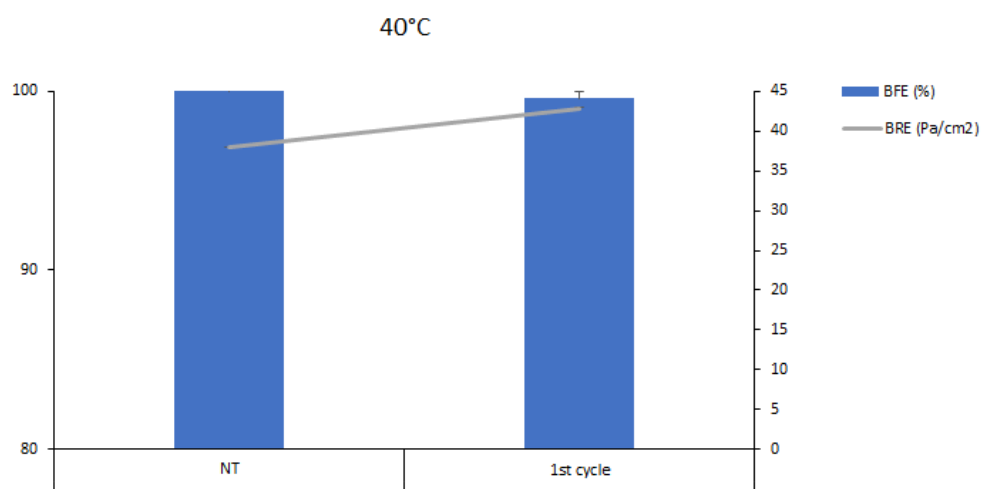


**Supplemental Figure S1.** Bulldog Plus Bio system configuration for BFE analysis: electronic sampler Bulldog Aero (1), an aerosol generator, that produces aerosol particles by nebulizing the bacterial solution (2), a pyrex and Teflon aerosol chamber (3), a glass condenser placed downstream of the impactor (4), an electronic flow sampler Bulldog Plus Bio (5) and an Andersen-type six-stages cascade impactor (6).

**Supplemental Table S1.** Cut-point sizes of the Andersen impactor.

Stage	$D_{50}$ , $\mu\text{m}$
1	7.1
2	4.7
3	3.3
4	2.1
5	1.1
6	0.65



**Supplemental Figure S2.** Evaluation of Bacterial Filtration efficiency (BFE) (%) and Breathability (BRE) (Pa/cm<sup>2</sup>) after one cycle of water immersion at 40 °C.