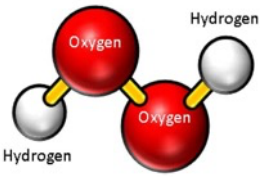
Stay Fresh®
Antimicrobial

Stay Fresh Antimicrobial Coating – powered by Hydrogen Peroxide.

Eco-friendly antimicrobial technology. Stay Fresh uses Hydrogen Peroxide (HP) to protect surfaces from bacterial and viral pathogens. HP degrades to only water and oxygen on use. The matrix product used to sequester HP is Zinc Oxide – as commonly found in sunscreen products and diaper creams. The coatings are durable and do not interfere with touchscreen functionality. The chemistry can scavenge peroxide from liquid or vapor phases during cleaning to recharge full efficacy.

Stay Fresh durably sequesters hydrogen peroxide in a dry state, and regenerates it on demand. The matrix material can scavenge peroxide from peroxide chemicals to recharge during cleaning.

Antimicrobial stewardship. Stay Fresh technology uses hydrogen peroxide as the active agent, which has been in use in the body for thousands of generations. Hydrogen peroxide attacks the bacterial cell wall and organelles, which offers the absolute lowest possibility for pathogens to develop resistance.

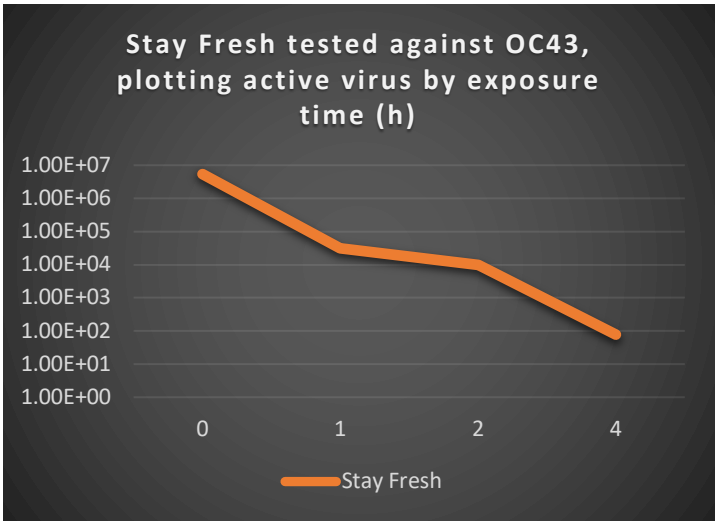


Efficacy against common pathogens:
Stay Fresh coatings were tested against common pathogens of public health interest. Stay Fresh data presented is uniformly at 2h test time, and includes samples that have been washed 20x per EPA coatings protocol. Stay Fresh samples were uniformly highly effective.

Tested samples	log reduction, vs. MRSA, 2h exposure unwashed	log reduction vs. *Pseudomonas aeruginosa* (PA), 2h exposure, unwashed	log reduction, vs. *E coli.* 2h exposure, 20x washed
Stay Fresh	**>99.99% kill**	**>99.99% kill**	**>99.99% kill**

Anti-Viral testing with Stay Fresh.
Stay Fresh coated samples were tested for antiviral efficacy (against HCoV OC43, an EPA accepted surrogate for SARS-CoV2) and found highly effective within 1-2h.

Time (h)	Stay Fresh	Reduction vs. initial
0	5,400,000	Initial value
1	30,500	99.44%
2	9,700	99.82%
4	78	99.9986%



SBIR
SMALL BUSINESS INNOVATION RESEARCH

Patent protected in US, Europe, Asia. US patent #s 8,277,827 9,549,547 9,808,548 9,986,742. 9,999,226
Phase 1 and phase 2 SBIR support provided by DoD, EPA, and NSF

Confidential QMT summary. *all presented data are testing results generated for research and are not to be construed as public health claims