

R-Zero Air and Surface Safety Report

Based on recent sampling in cities across the U.S., R-Zero found that **the air we breathe is 5x dirtier** than the surfaces we touch. **“Only 10% of the surfaces we sampled carried harmful microorganisms, while five times that were in the air. So, most of us are unknowingly breathing dirty air,** and it’s time we clean it up and minimize the risk of exposure for people,” said Richard L. Wade, PhD, MPH, Chief Scientist for R-Zero.

600 Sampling Locations Across the U.S.

How we collected samples:

R-Zero conducted random air and surface samples in nearly **600 locations** across the U.S. over the last several months.

Findings:



In cities across the U.S., **four of the FDA’s “Bad Bugs” make appearances in common public spaces**



Three out of seven random air samples (or 43%) tested positive for SARS-CoV-2



56% of air samples had harmful or emerging opportunistic microorganisms present



In a bar setting, **sampling identified 4200 spores per cubic meter - almost 4x** versus outside (you would expect the sample count to be higher outside)



80% of restroom sites in Dallas, TX, and San Francisco, CA, tested positive for harmful microorganisms



Hotel lobbies and bars showed respectively **5,700 and 8,000 skin cells per cubic meter of air**



Areas containing the highest risk:



Gas station bathrooms



Gyms



Mall food courts



Hotel lobbies



Bars



High-end retail fitting rooms

Conclusions

The samples showed that in a variety of public spaces, surfaces and the air carry everything from SARS-CoV-2 to Staphylococcus aureus and other harmful microorganisms. While not all the places where people are most likely to encounter a harmful microbe are surprising (gas station bathrooms, for example) there are a few unexpected locations, such as high-end retail dressing rooms.

The almost ubiquitous presence of harmful microorganisms in shared, public spaces is concerning. It also underscores the importance of the Healthy Buildings principals and the need to advance new standards for technology to achieve healthier indoor environments and deliver more equitable, effective, and sustainable indoor spaces.

Visit [rzero.com](https://www.rzero.com) to learn more about how R-Zero is leading these efforts.