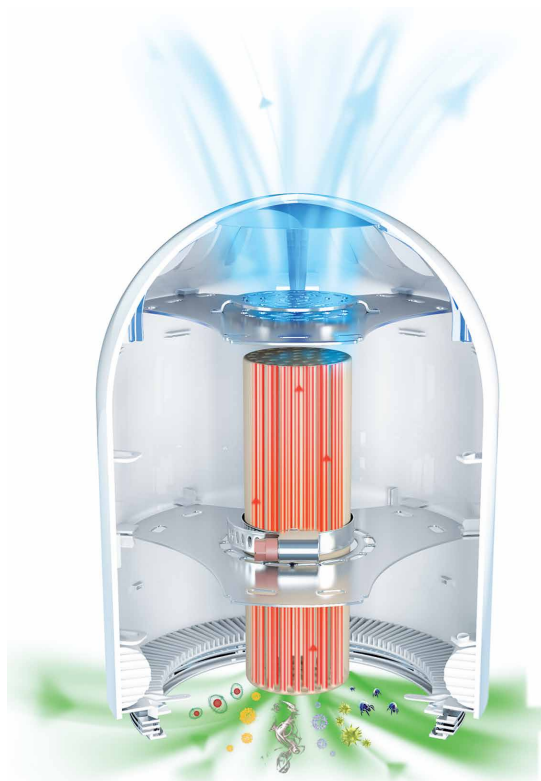


Airfree TSS technology

Airfree is a complementary precaution to keep a low level of microorganisms in indoor environments. WHO's standard recommendations for individual protection, reducing exposure and cross transmission are to be followed.

Airfree cannot warrant that all room viruses will be destroyed before being inhaled.



Since 1977, studies have shown that the higher the temperature, the faster the proteins get denatured⁷. Therefore, we may infer that Airfree purifiers are effective in the inactivation of viruses proteins in most cases.

Airfree additional advantages



Patented and environmentally friendly technology



Maintenance-free



Totally silent



Low energy consumption



Small and portable

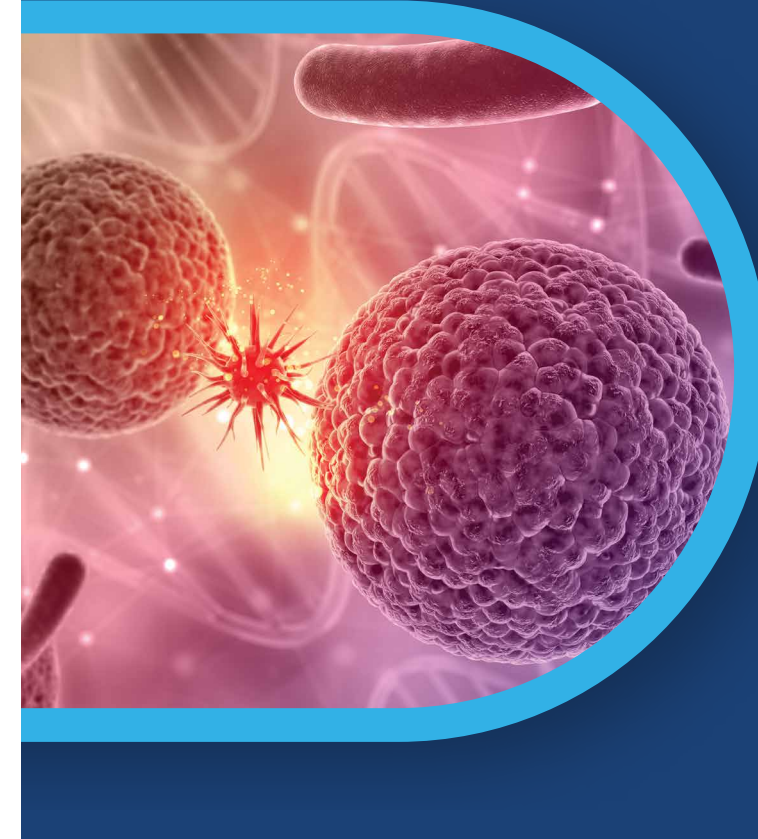


Ozone-free

Sources:

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- B - https://www.who.int/influenza/resources/documents/food_risk_h5n1_11_2005/en/
- C - India Leclercq et al. (2014) Heat inactivation of the Middle East respiratory syndrome coronavirus. *Influenza and Other Respiratory Viruses* 8(5), 585-586.
- D - Maschmann, J., Müller, D., Lazar, K., Goelz, R., Hamprecht, K. (2019). New short-term heat inactivation method of cytomegalovirus (CMV) in breast milk: impact on CMV inactivation, CMV antibodies and enzyme activities. *ARCHIVES OF DISEASE IN CHILDHOOD-FETAL AND NEONATAL EDITION* Volume: 104 Issue: 6 Pages: F604-F608.
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Airfree®
AIR PURIFIERS



Airfree destroys viruses

Virus

Viruses and heat inactivation

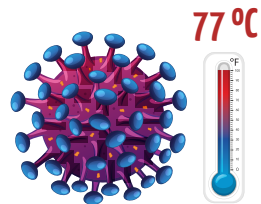
While viruses are not considered living organisms by part of the scientific community, they depend upon living cells to replicate. The structure of the virus includes an envelope constituted by proteins and genetic material of DNA or RNA.

All of these components are thermo-sensitive. The genetic material and the proteins have complex structures regulating their function, and any change in this structure may result in a loss of function known as denaturation. There are two basic means by which denaturing occurs: a change in PH or temperature.

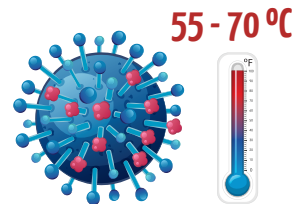


Examples of virus inactivation by heat

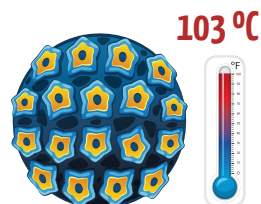
Numerous studies confirm the inactivation of viruses with the application of heat. For example, the HIV virus in the blood will die when exposed to 77°C for just 0.006 seconds¹. In another study², the “parvovirus” and “phage phiX174” viruses were completely inactivated when exposed to 103°C. The SARS and MERS viruses (coronaviruses that cause Severe Acute Respiratory Syndrome or Middle East Respiratory Syndrome) have temperature sensitive proteins in their envelopes, which can be totally denatured at temperatures above 65°C, and remain inactive^{5c}. Similarly, proteins essential for the transmission of the influenza virus are sensitive to temperatures between 55°C and 70°C⁶. In all those cases, the temperatures were below the Airfree’s ceramic core internal temperature of 200°C.



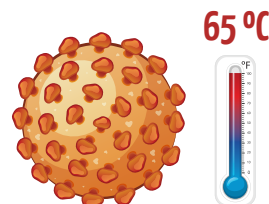
HIV



Influenza



Parvovirus



SARS
and MERS

Airfree destroys rather than holds viruses

