Streamer technology used for a safe, germ-free environment

Daikin Industries Limited, an air-conditioning brand, confirms the effectiveness of patented streamer technology to inactivate many viruses that can lead to respiratory illnesses. The brand says it was proved in a joint study done with Professor Shigeru Kyuwa, Department of Biomedical Science, the University of Tokyo, and a group research professors from Department of Microbiology, Okayama University of Science.

To verify the effectiveness of streamer technology, the brand has previously demonstrated over 60 types of harmful substances, including some bacteria, allergens and viruses, to be suppressed/inactivated by the technology. The technology uses streamer discharge, which Daikin says they developed in 2004, to perform oxidative decomposition of harmful substances.

It is a type of plasma discharge featuring an innovative air purification technology that stably generates "high-speed electrons," a feat which had proven difficult up to that time, says the company.

Its oxidative decomposition capability is much greater than that of conventional plasma discharge (glow discharge), the company further says. Moreover, when combined with air components, these high-speed electrons have a capability for powerful oxidative decomposition, and this capability enables streamer discharge to continuously remove odours, bacterias, and indoor air pollutants like formaldehyde, the brand says.

The brand adds that it has been collaborating with numerous universities and public research institutes to demonstrate the effectiveness of this technology for certain respiratory viruses as well as toxins and bacterias that cause food poisoning.

KJ Jawa, CEO & MD of Daikin India, said, "We are continuously researching various technologies and remain at the forefront of innovations that impact the human kind to lead a better life. We expect our Streamer Technology would be useful to reduce the risk of infection in real spaces like offices, homes, medical facilities and vehicles too, in future."

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Disclaimer: This demonstration shows the results of experiments using a device that generated streamer discharge under test conditions and does not indicate the effectiveness of an actual streamer product in use under actual conditions (living space).