SHARP Plasmacluster Technology deactivate 99% of airborne viruses

Enjoy clean, healthy, safe air with Sharp Plasmacluster. It has been proven to remove harmful viruses, bacteria, mould and other airborne allergens, for your complete peace of mind.

Viruses

Virus	Test Environment /Effects	Verification by Organisation	Virus Overview	Date	Related Information
Floating H7N9 avian influenza virus	Test space: 1m³ box Elapsed time: about 47 minutes Inhibition rate: 99%	Vietnam Ho Chi Minh City Pasteur Institute	Influenza pathogen virus that infects humans	November 2015	News Release (November 17, 2015)
Floating H1N1 influenza virus	Test space: 25m³ Elapsed time: about 66 minutes Inhibition rate: 99%	Vietnam Ho Chi Minh City Pasteur Institute	Influenza pathogen virus that infects humans	September 2012	News Release (September 20, 2012) (Japanese text) Presentation Report (September 20, 2012) (Japanese text)
Attached H1N1 influenza virus	Test space: 25m³ Elapsed time: about 11 hours Inhibition rate: 99% or more	Institute of Food and Environmental Health	Influenza pathogen virus that infects humans	September 2012	News Release (September 20, 2012) (Japanese text) Presentation Report (September 20, 2012) (Japanese text)
Attached H3N2 influenza virus	Test space: 25m³ Elapsed time: about 10 hours Inhibition rate: 99% or more	Institute of Food and Environmental Health	Influenza pathogen virus that infects humans	September 2012	News Release (September 20, 2012) (Japanese text) Presentation Report (September 20, 2012) (Japanese text)
H5N1 avian influenza virus	Test space: 1m³ box Exposure time: 10 minutes Suppression	UK Retro Screen Virology	Influenza pathogen virus infecting birds	August 2008	News Release (August 27, 2008) (Japanese text) Presentation Report (May 14, 2009)

	rate: 99.9%				(Japanese text)
	Test space: 1m³ box Exposure time: 10 minutes Suppression rate: 99.9%	UK Retro Screen Virology	Influenza pathogen virus infecting birds	May 2005	News Release (June 6, 2005) (Japanese text) Presentation Report (May 14, 2009) (Japanese text)
H1N1 human influenza virus	Test space: 1m³ box Exposure time: 25 minutes Suppression rate: 99.7%	(Study) Kitasato Institute, Kitasato University, Kitasato Institute Medical Center Hospital	Influenza pathogen virus that infects humans	February 2014	
Feline coronavirus	Test space: 1m³ box Exposure time: 35 minutes Suppression rate: 99.7%	(Study) Kitasato Institute, Kitasato University, Kitasato Institute Medical Center Hospital	Feline infectious peritonitis pathogen virus	July 2004	News Release (July 27, 2004)
SARS virus	Test space: One-pass test Exposure time: 3.3 seconds Suppression rate: 73.4%	UK Retro Screen Virology	SARS pathogen virus	October 2005	
Coxsackie virus	Test space: One-pass test Exposure time: 3.3 seconds Suppression rate: 98.9%	Kitasato Environmental Science Center	Summer cold pathogen virus	September 2002	
Poliovirus	Test space: One-pass test Exposure time: 3.3 seconds Suppression rate: 99.6%	Kitasato Environmental Science Center	Pathogen virus of pediatric paralysis	September 2002	
Canine parvovirus	Test space: 1m³ box Exposure time: 5 minutes Suppression rate: 99.8%	Institute of Food and Environmental Health	Pathogen virus infecting dogs	November 2010	News Release (November 5, 2010) Presentation Report (November 5, 2010)
Novel coronavirus (SARS-CoV-2)	Test space: Approx. 3 liters	National Research Center for the Control and Prevention of Infectious	Airborne novel coronavirus	September 2020	News Release (Sep 7, 2020)

	Exposure time: 30 seconds Suppression rate: 90%	Diseases/Institute of Tropical Medicine, Nagasaki University	(SARS-CoV-2)		

* Calculated based on experimental data.

Clinical Effect	Verification by Organisation	Date	Related Information
Reduction of influenza virus infection rate in humans	The University of Tokyo Graduate School of Medicine / Public Health Research Center	November 2010	News Release (November 5, 2010) Presentation Report (November 5, 2010) (Japanese text)

Bacteria

Bacteria	Verification by Organisation	Date	Related Information
Bacillus cereus	Institute of Food Environment and Health	April 2014	News Release (April 3, 2014)
Serratia bacteria	Dr. Melvin First, Professor Emeritus, Harvard School of Public Health, USA	March 2007	News Release (August 3, 2007) (Japanese text)
Enterococcus, Staphylococcus, Sarkina, Micrococcus	Professor Aachen, Aachen University of Applied Sciences, Germany	November 2004	
Bacillus bacteria	Professor Aachen, Aachen University of Applied Sciences, Germany	November 2004	
	Kitasato Environmental Science Center	September 2002	
MRSA (methicillin-resistant Staphylococcus aureus)	(Study) Kitasato Institute, Kitasato University, Kitasato Institute Medical Center Hospital	February 2004	News Release (November 13, 2009)
	Kitasato Environmental Science Center	September 2002	
Pseudomonas, Enterococcus, Staphylococcus	University of Lübeck, Germany	February 2002	
E. coli, Staphylococcus aureus, Candida, Staphylococcus aureus	China Academy of Preventive Medicine Shanghai	October 2001	

E. coli	Ishikawa Preventive Medicine Association	September 2000	
Staphylococcus Pseudointermedius, Pseudomonas aeruginosa, Microsporum canis, Microsporum gypseum	Biosta Co., Ltd.	September 2018	News Release (September 8, 2016) (Japanese)
Clinical effect	**Verification by Organisation**	**Date**	**Related Information**
Effects of reducing the risk of tuberculosis infection at tuberculosis hospitals	Georgia Tuberculosis Hospital	September 2016	News Release (September 8, 2016)

Harmful Chemicals

Harmful chemicals	Verification by Organisation	Date	Related Information
Aromatic carboxylic acid (benzoic acid) and alkane (hexadecane)	Sumika Chemical Analysis Service, Ltd.	April 2014	News Release (April 3, 2014)

Allergens

Allergens	Verification by Organisation	Date	Related Information
Fungi attached	Biosta Co., Ltd.	March 2018	News Release (March 8, 2018) (Japanese)
Major allergens in crude allergens of floating mould (Aspergillus fumigatus)	Hiroshima University Graduate School of Advanced Sciences of Matter	April 2014	News Release (April 10, 2014)
Dust feces and dead particles	Research Institute of Medical Science	August 2011	News Release (August 4, 2011) (Japanese)
			Presentation Report (August 4, 2011) (Japanese)
	Research Institute of Medical Science	May 2011	News Release (May 16, 2011) (Japanese)
			Presentation Report (May 16, 2011) (Japanese)
	Osaka City University Graduate School of Medicine, Department of	July 2009	News Release (July 27, 2009)

	Molecular Pathology		
Mite dung, dead particles, pollen allergen *	Hiroshima University Graduate School of Advanced Sciences of Matter	September 2003	News Release (September 3, 2003) (Japanese)

*Allergens on the surface of pollen and allergens that are released due to cracking of the outer shell can be decomposed and removed, but the pollen outer shell cannot be broken by the plasmaclaster

Clinical Effect	Verification by Organisation	Date	Related Information
Clinical effects on pediatric asthma patients	Chuo University Faculty of Science and Technology / University of Tokyo Hospital Hospital Clinical Research Support Center	September 2014	News Release (September 18, 2014) Presentation Report (September 18, 2014) (Japanese)

Fungus

Fungus	Verification by Organisation	Date	Related Information
Trichophyton	Chiba University Research Center for Fungal Medicine	July 2019	News Release (July 22, 2019)
Bilcandera fungus	Institute of Food Environment and Health	April 2014	News Release (April 3, 2014)
Dust feces and dead particles	Professor Aachen, Aachen University of Applied Sciences, Germany	November 2004	
	University of Lübeck, Germany	February 2002	
	Ishikawa Preventive Medicine Association	September 2000	
Aspergillus, Penicillium (2 types), Stachybotrys, Alternaria, Mucor	Professor Aachen, Aachen University of Applied Sciences, Germany	November 2004	
Penicillium, Aspergillus	University of Lübeck, Germany	February 2002	

Hair in dander

Clinical Effect	Verification by Organisation	Date	Related Information
Hair growth effect by improving barrier function of scalp (improving scalp environment)*	National Trust / HARG Treatment Center	October 2016	News Release (October 13, 2016)

*A function that retains moisture in the scalp.

Facial Care

Bacteria on beautiful skin	Verification by Organisation	Date	Related Information
Moisturising effect on skin	Research Institute of Medical Science	February 1, 2010	News Release (February 17, 2010) Presentation Report (February 17, 2010) (Japanese)
Skin moisturising mechanism	Tohoku University Research Institute of Electrical Communication	June 1, 2010	News Release (June 4, 2010) Presentation Report (June 4, 2010) (Japanese)
Effective skin moisturising / improving elasticity / texture	Research Institute of Medical Science	June 1, 2010	News Release (June 4, 2010) Presentation Report (June 4, 2010) (Japanese)
Skin sebum suppression	Research Institute of Medical Science	August 1, 2010	News Release (August 5, 2010) Presentation Report (August 5, 2010) (Japanese)
Inhibits the growth of adherent bacteria (Staphylococcus aureus) on the skin	Research Institute of Medical Science	August 1, 2010	News Release (August 5, 2010) Presentation Report (August 5, 2010) (Japanese)

Odour

Bacteria caused by fresh odour	Verification by Organisation	Date	Related Information
Eradication effect of suspended	Institute of Food and Environmental	July 2012	Test method and test

Moraxella bacteria	Health		results (Japanese)
Bacteria caused by fresh odour	**Verification by Organisation**	**Date**	**Related Information**
Eradication effect of suspended Moraxella bacteria	Institute of Food and Environmental Health	July 2012	Test method and test results (Japanese)
Growth inhibitory effect of attached Moraxella bacteria	Institute of Food and Environmental Health	July 2012	Test method and test results (Japanese)

Stress and concentration

Effect	Verification by Organisation	Date	Related Information
Stress level	Dentsu Science Jam Inc.	November 2017	Close-up (Japanese)
Degree of concentration	Dentsu Science Jam Inc.	November 2017	Close-up (Japanese)