



Sharp Middle East Fze
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Press Release

November 8, 2009

Sharp announced that its exclusive **Plasmacluster[®] Air Purification Technology is proven effective against the **New-type H1N1 SWINE Influenza virus (reduced by 99.9%)****

Plasmacluster ion technology was developed by Sharp Corporation Japan, in the year 2000. Its products such as air-purifiers, ion-generators, air-conditioners and refrigerators are equipped with this technology, in which positive ions [H+] and negative ions [O₂-] are released into the air simultaneously. These positive and negative ions instantly recombine on the surface of virus, bacteria, mold fungus, and allergens floating in the air. They form hydroxyl (OH) radicals, and decompose proteins on the surface of virus and other pathogens, thereby inhibiting their activity.

Joint research by Sharp and Retroscreen Virology Ltd., established by Professor John S. Oxford of the University of London, a world authority on virology, has shown that the Plasmacluster ions inhibit 99.9% of the new-type H1N1 influenza virus in stationary form, and 95% of the virus in airborne form*¹.

Since year 2000, Sharp started working together with academic research organizations around the world, and has demonstrated that Plasmacluster Ion technology can reduce the activity of 28 different harmful airborne microbes, including the seasonal H1N1 strain of human influenza virus, as well as H5N1 Avian Influenza ("Bird Flu") Virus, Corona, SARS and MRSA.

Fumio Yamaguchi, the Managing Director of Sharp Middle East, said *"our mission is to contribute to the society, by providing products with plasmacluster ion technology which can help to improve the indoor-air-quality (IAQ). Especially in this region, many people are suffering from allergies and asthma due to poor indoor-air-quality. We believe that*




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our plasmacluster ion technology, which has also been proven effective against mite allergens (the major trigger of allergic asthma), will be one of the best solutions for them”.


*“There are many other disinfection technologies available and maybe they can inactivate the virus as well. However, Sharp’s plasmacluster ion technology is our one-of-a-kind technology in which the positive and negative ions generated are the same kind of ions as those existing in nature, which leaves the users feeling like they breathing fresh forest-like air even when inside or in indoor spaces. Nevertheless, its safeness has been proven with international standard*², making it an ideal solution for home users”* said Kumar Ravinder, Senior Product Manager of Sharp Middle East.

Sharp is Japan’s No.1, and one of the leading air purifier brands in UAE. It has a wide range of air purifiers suitable for room sizes ranging from 20 to 48 square meters, as well as High Density Plasmacluster ion generators for household and commercial applications.


Not only on its own products, Plasmacluster ion technology is also adopted by other industries such as vehicles and elevators. The total sales of products equipped with Sharp’s Plasmacluster ion technology has reached 20 million units worldwide.




KC-series Air Purifiers
with **Humidifying Function**



KC860EW (White)




KC850EW (White)
KC850ER (Red)




KC840EW (White)
KC840EB (Black)

HIGH-DENSITY PLASMACLUSTER IONS		Model	KC860	KC850	KC840
Applicable Floor Area (m ²)	Without Humidifying		48	38	26
	With Humidifying		33	28	21
Airflow (Max/Med/Low) (m ³ /hr)	Without Humidifying		396/240/84	306/168/60	210/132/48
	With Humidifying		396/240/120	288/168/84	186/132/54
Power Input (Max/Med/Low) (w)	Without Humidifying		56/19/5.5	41/11.6/3.8	26/9.5/3.7
	With Humidifying		56/21/8.8	40/13.5/6.8	21/11.5/6.1
Noise Level (Max/Med/Low) (dB)	Without Humidifying		51/39/17	47/35/15	45/34/15
	With Humidifying		50/39/25	47/35/22	42/34/20
Outer Dimension (mm) (WxHxD)			398x627x288	378x586x265	360x550x233
Weight (kg)			11.0	9.0	8.0
Power Cord Length (m)			2.0	2.0	2.0
Replacement Filter	HEPA filter		FZ-C150HFE	FZ-C100HFE	FZ-C70HFE
	Deodorizing filter		FZ-C150DFE	FZ-C100DFE	FZ-C70DFE
	Humidifying filter		FZ-C100MFE	FZ-C100MFE	FZ-C100MFE


Specification




Plasmacluster Ion Generator



IGA40



IGA20



IGA10

HIGH-DENSITY PLASMACLUSTER IONS		Model	IGA40	IGA20	IGA10
Applicable Floor Area (m ²)			50	23	10
Airflow (Max/Med/Low) (m ³ /hr)			840/648/510	468/390/306	102/72
Power Input (Max/Med/Low) (w)			39/20/10	22/14/9	14/-/6.5
Noise Level (Max/Med/Low) (dB)			47/40/34	45/40/34	44/-/34
Outer Dimension (mm) (WxHxD)			940x230x480	594x230x480	140x160x345
Weight (kg)			15.0	10.5	2.5
Power Cord Length (m)			2.0	2.0	1.8
Replacement PCI Unit			IZ-CA40E(U)	IZ-CA20E(U)	IZ-CA10E

Efficacy of Plasmacluster Ions in Inhibiting Activity of Various Pathogens Confirmed Through Collaborative Research

Target Substance	Species	Testing & Verification Organization	Date of Announcement
Bacteria	<i>Serratia</i> bacteria	Harvard School of Public Health (Dr. Melvin W. First, Professor Emeritus), United States	March 2007
	Coliform bacteria (<i>E. coli</i>)	Ishikawa Health Service Association, Japan	September 2000
	<i>E. coli</i> , <i>Staphylococcus aureus</i> , Candida	Shanghai Municipal Center for Disease Control and Prevention, China	October 2001
	<i>Bacillus subtilis</i>	Kitasato Research Center of Environmental Sciences, Japan	September 2002
		CT&T (Professor Gerhard Artmann, Aachen University of Applied Sciences), Germany	November 2004
	MRSA (methicillin-resistant <i>Staphylococcus aureus</i>)	Kitasato Research Center of Environmental Sciences, Japan	September 2002
		Kitasato Institute Medical Center Hospital, Japan	February 2004
	Pseudomonas, Enterococcus, Staphylococcus	University of Lübeck, Germany	February 2002
Enterococcus, Staphylococcus, Sarcina, Micrococcus	CT&T (Professor Gerhard Artmann, Aachen University of Applied Sciences), Germany	November 2004	
Allergens	Mite allergens, pollen	Graduate School of Advanced Sciences of Matter, Hiroshima University, Japan	September 2003
	Mite allergens	Osaka City University Medical School's Department of Biochemistry & Molecular Pathology	July 2009
Fungi	Cladosporium	Ishikawa Health Service Association, Japan	September 2000
		University of Lübeck, Germany (growth-suppressing effect)	February 2002
		CT&T (Professor Gerhard Artmann, Aachen University of Applied Sciences), Germany	November 2004
	Penicillium, Aspergillus	University of Lübeck, Germany (growth-suppressing effect)	February 2002
	Aspergillus, Penicillium (two species), Stachybotrys, Alternaria, Mucorales	CT&T (Professor Gerhard Artmann, Aachen University of Applied Sciences), Germany	November 2004

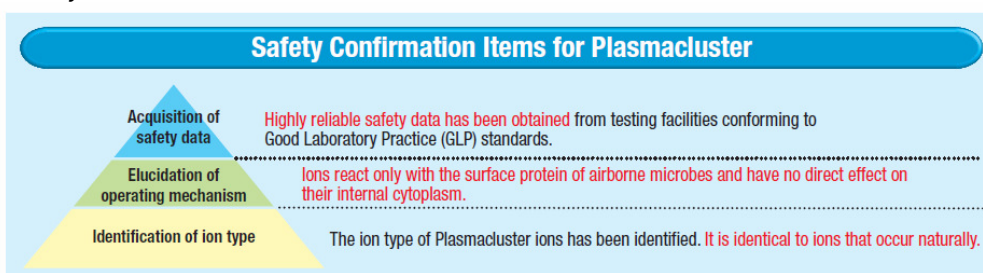
Target Substance	Species	Testing & Verification Organization	Date of Announcement
Viruses	H1N1 human influenza virus	Kitasato Research Center of Environmental Sciences, Japan	September 2002
		Seoul University, Korea	September 2003
		Shanghai Municipal Center for Disease Control and Prevention, China	December 2003
		Kitasato Institute Medical Center Hospital, Japan	February 2004
	H5N1 avian influenza virus	Retroscreen Virology, Ltd., London, UK	May 2005 August 2008
	SARS virus	Retroscreen Virology, Ltd., London, UK	October 2005
	Coxsackie virus	Kitasato Research Center of Environmental Sciences, Japan	September 2002
	Polio virus	Kitasato Research Center of Environmental Sciences, Japan	September 2002
	Corona virus	Kitasato Institute Medical Center Hospital, Japan	July 2004
New-type H1N1 influenza virus	Retroscreen Virology, Ltd., London, UK	November 2009	

Note: Efficacy in inhibiting activity of the airborne target substances noted above was verified by exposing the substances to an ion concentration of at least 3,000 ions/cm³.

*¹ It was shown that Plasmacluster ions inhibit 99.9% of the new-type H1N1 influenza virus in stationary form (drops of the virus placed in a petri dish; concentration of 300,000 ions/cm³) in 2 hours and 95% of the virus in airborne form (inside a box with a volume of 1 m³; concentration of 25,000 ions/cm³) in 40 minutes.

For further details of experiment, please refer to the News release of Sharp Corporation dated 3 Nov 2009.

*² Safety test for Plasmacluster ions



Safety Evaluation Completed in Conformance to International Guidelines

Internationally acceptable safety data based on OECD testing guidelines has been obtained in order to obtain safety certification of chemical substances.

	Purpose	Name of Test (Abbreviated)	GLP Standard Certification Date
1	General irritation of skin	Acute skin irritation/corrosion test using rabbits	Sep. 3, 2004 Mitsubishi Chemical Safety Institute Ltd. (MSI)
2	General irritation of eyes	Acute eye irritation/corrosion test using rabbits	Sep. 3, 2004 Mitsubishi Chemical Safety Institute Ltd. (MSI)
3	General genotoxicity	Gene expression analysis test using GeneChip on rat lungs after 28-day whole body inhalation exposure	Sep. 20, 2005 Mitsubishi Chemical Safety Institute Ltd. (MSI)