SHARP

Be Original.

AIR PURIFIER and ION GENERATOR

2022

Effortless Clean Comfort

Peace of mind with Plasmacluster

Plasmacluster ions are positive and negative ions that occur in nature. Plasmacluster is air-purifying technology. Its effectiveness has been supported by test data, and Plasmacluster is thus increasingly finding applications in various areas of activity, such as in businesses, in addition to household use. Plasmacluster provides you with natural and safe air.

SHARP's Original Technology

Plasma discharge generates and emits the same positive and negative ions that occur in nature. Plasmacluster technology is Sharp's original air purifying technology that removes airborne mold and viruses.

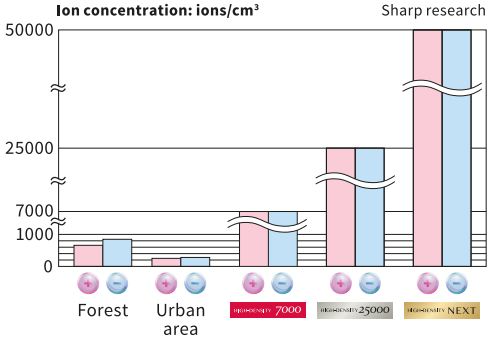
Winner of the 2008 Invention Prize
National Invention Awards Ceremony held by the Japan Institute of Invention and Innovation (JIII)
Patented by Sharp (patent number 3680121)

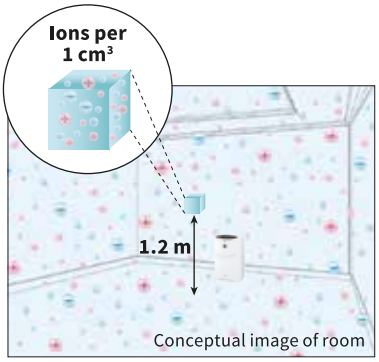
The Same Safe Ions As in Nature

The safety of Plasmacluster ions has been verified, and so a high density of ions can be used. With more positive and negative ions in a room than even in a forest, Plasmacluster provides an environment of even greater effectiveness.

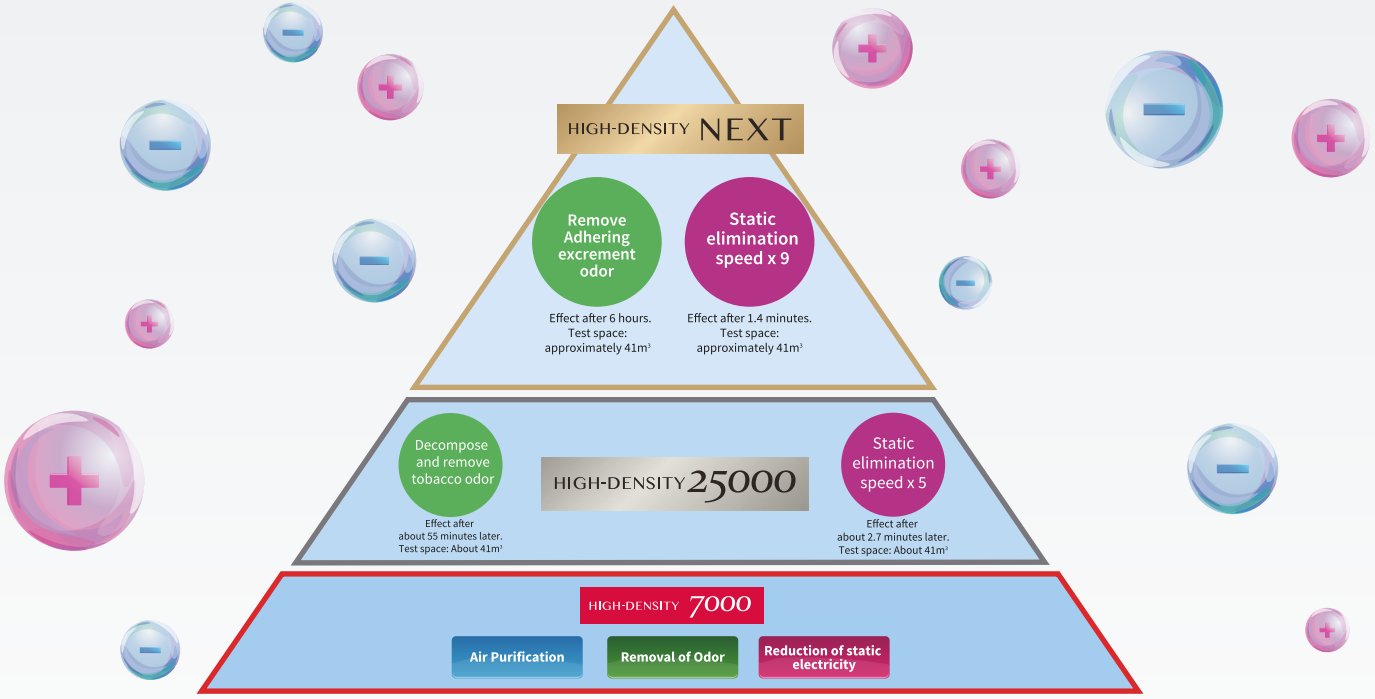
Numbers of ⊕ and ⊖ ions per 1 cm^3 when measured near the center of a room (at a height of 1.2 m from the floor) with the product placed at a wall:

Plasmacluster NEXT	Plasmacluster 25000	Plasmacluster 7000
⊕⊖ ions each **50,000** or more	⊕⊖ ions each **25,000** or more	⊕⊖ ions each **7,000** or more





Air purification power of Plasmacluster



* Note: Above data are verified under the test condition. The effects may differ depending on the actual usage/environment.

Purification Ability of Plasmacluster Air Purifier

The higher the PCI density is, the more effective PCI is.

	Air Purifying					Removal of Odor			
	Airborne				Reduction of Static Electricity*5	Cigarette odor*6	Adhering excrement odor*7	Spot Deodorization	
	Mold*1	Viruses*2	Microbes*3	Allergens*4				Sweat odor*8	Damp-dry odor*9
HIGH-DENSITY NEXT	14 min	9 min	14 min	14 min	1.4 min	30 min	6 hours	6 hours	3 hours
HIGH-DENSITY 25000	14 min	9 min	14 min	14 min	2.7 min	55 min		6 hours	3 hours
HIGH-DENSITY 7000	49 min	18 min	51 min	51 min	13 min	90 min		6 hours	3 hours
Testing space	25 m³	25 m³	25 m³	25 m³	41 m³	41 m³	41 m³		

*1 Airborne Mold ● Tested by: Japan Food Research Laboratories ● Test method: Performance evaluation test according to voluntary standard HD-131 of the Japan Electrical Manufacturers' Association in a testing space of approx. 25 m³. ● Object tested: One type of airborne mold. ■ Test result: 99% reduction in approx. 14 minutes, tested with a model in the same class as the KI-J101 operating at the High airflow setting. 99% reduction in approx.49 minutes, tested with a model in the same class as the FP-J30 operating at the High airflow setting.

*2 Airborne Viruses ● Tested by: Pasteur Institute in Ho Chi Minh City, Vietnam ● Test method: Performance evaluation test according to voluntary standard JEM 1467 of the Japan Electrical Manufacturers' Association in a testing space of approx. 25 m³. ● Object tested: One type of airborne virus. ■ Test result: 99% reduction in approx. 9 minutes, tested with a model in the same class as the KI-J101 operating at the High airflow setting. 99% reduction in approx.18 minutes, tested with a model in the same class as the FP-J30 operating at the High airflow setting.

*3 Airborne Microbes ● Tested by: Japan Food Research Laboratories ● Test method: Performance evaluation test according to voluntary standard HD-131 of the Japan Electrical Manufacturers' Association in a testing space of approx. 25 m³. ● Object tested: One type of airborne microbe. ■ Test result: 99% reduction in approx. 14 minutes, tested with a model in the same class as the KI-J101 operating at the High airflow setting. 99% reduction in approx. 51 minutes, tested with a model in the same class as the FP-J30 operating at the High airflow setting.

*4 Airborne Allergens from Dust Mite Feces and Remains ● Tested by: ITEA Inc. ● Test method: Allergens from dust mite feces and remains were suspended in the air in a testing space of approx. 25 m³ and measured using the ELISA method. ■ Test result: 99% reduction in approx. 14 minutes, tested with a model in the same class as the KI-J101 operating at the High airflow setting. 99% reduction in approx. 51 minutes, tested with a model in the same class as the FP-J30 operating at the High airflow setting.

*5 Static Electricity ● Tested by: Sharp ● Test method: Measurement of time required for a metal sensing plate charged to 5 kV to decrease in charge to 0.5 kV. ■ Test result: A.er approx. 1.4 minutes for a model is the same class as the KI-J101, approx. 2.7 minutes for a model in the same class as the FP-J60 and approx. 13 minutes for a model in the same class as the FP-J30.

*6 Clinging Cigarette Odor ● Tested by: Sharp ● Test method: The effectiveness of deodorizing a cloth swatch impregnated with cigarette odor components was evaluated by using the six-level odor intensity indication method. ■ Test result: Deodorized to unnoticeable levels a.er approx. 30 minutes for a model is the same class as the KI-J101, approx. 55 minutes for a model in the same class as the FP-J60 and approx. 90 minutes for a model in the same class as the FP-J30.

*7 Adhering Excrement Odor ● Tested by: Sharp ● Test method: The effectiveness of deodorizing a cloth swatch impregnated with excrement odor components was evaluated by using the six-level odor intensity indication method. ■ Test result: Deodorized to unnoticeable levels a.er approx. 6 hours for a model in the same class as the KI-J101.

*8 Sweat Odor Clinging to Clothing ● Tested by: Sharp ● Test method: The effectiveness of deodorizing a cloth swatch impregnated with sweat odor components was evaluated by using the six-level odor intensity indication method. ■ Test result: Deodorized to unnoticeable level in about 6 hours. Tested with a model in the same class as the FP-J30.

*9 Damp-dry Odor on Clothes Drying Indoors ● Tested by: Sharp ● Test method: The effectiveness of deodorizing a cloth swatch impregnated with damp-dry odor components on clothes drying indoors was evaluated by using the six-level odor intensity indication method. ■ Test result: Deodorized to unnoticeable level in approx. 3 hours. Tested with a model in the same class as the FP-J30 operating.

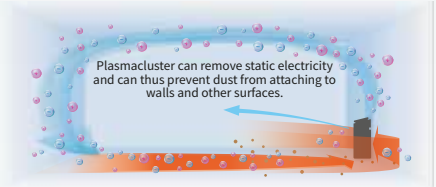
Benefits of Plasmacluster Air Purifier

Three-step Dust Collection System

1 REMOVE
Plasmacluster Ions Can Remove Mold, Viruses, Allergens, Odors, and Static Electricity

2 COLLECT
Powerful Air Suction and Unique Airflow Quickly and Efficiently Collect Dust and Other Particles

Faster airflow at a 20° angle collects dust at lower levels in the room for more effective cleaning.



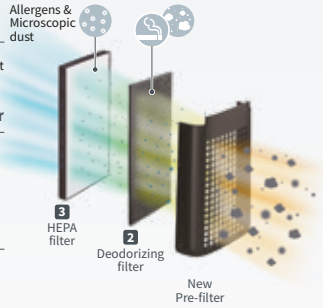
Patented by Sharp
- No. 4118316 (Japan)
- No. MY-144907-A (Malaysia)
- No. IDP 0029038 (Indonesia)

3 CAPTURE
High-Performance Filters Capture Airborne Dust Particles

1 New Pre-filter
Captures larger than approx. 240 micron dust particles, washable.

2 Deodorizing filter
Absorbs cigarette odor, pet odor and many other common household odors.

3 Electrostatic HEPA filter
Traps 99.97% of microscopic particles (as small as 0.3 micron) in the air.



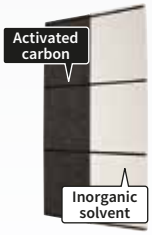
What the HEPA Filter Captures

99.97% capture and removal of 0.3-micron dust particles

Tree pollen	Cedar, cypress, birch, alder, beech, red cedar, oak, pine
Grass pollen	Ragweed, wormwood, hop, orchard grass, vernal grass, timothy grass
Allergens	Dust mite feces, dust mite remains, dog dander, cat dander, hamster dander, mold
Viruses / Airborne microbes	
Airborne mold	Black mold, Stachybotrys, Aspergillus niger, Penicillium
Dust	Dust, pet hair, pet dander, cigarette smoke, cooking fumes, mite dust, diesel exhaust particles, Asian dust
Odors	Cigarette odor, pet odor, cooking odor, kitchen food waste odor, toilet odor, body odor, mold odor, ammonia odor

High-Performance Double Deodorizing Filters

With an inorganic solvent added to the conventional deodorizer of activated carbon, the absorption volume increased approx. three times[*3] in comparison to Sharp data. Also, use of synthetic enzymes and a chemical solvent enables decomposition of odor sources into small components, which are then absorbed. A wide variety of odors are deodorized by using these three substances, resulting in no need for filter replacement for 10



Absorption	+	Decomposition by	+	Change by
Approx. 3 times[*3] in Sharp comparison		synthetic enzymes		chemical solvent
Physisorption of activated carbon and inorganic solvent		Odor substances are reduced into small components and absorbed.		Odor substances are changed into other substances and absorbed.

Approved by the British Allergy Foundation

The British Allergy Foundation has tested KI, KC, and FP-series Sharp Plasmacluster air purifiers and verified that airborne allergens including dust mite faeces and remains, as well as pollen, are removed.

A Clean and Healthy Home

FP-J30J-B
Recommended Room Size:
49.5m²

Small rooms and closets

FX-J80J-W
Recommended Room Size:
127.89m²

Living rooms and Bedrooms

Protect Staff and Visitors with Plasmacluster

FP-J30J-B
Recommended Room Size:
49.5m²

Small Meeting Rooms, Medical / Treatment Rooms

FX-J80J-W
Recommended Room Size:
127.89m²

Classrooms, Aged Care Facilities, Office Spaces, Reception Areas, Hotels

Specifications: Air Purifiers

Models		FX-J80J-W	FP-J30
Color		White	– B (black)
Recommended area*1	Air purifying	127.89 m²	49.5 m²
Recommended area*2 for high-density Plasmacluster ions		35 m²	16 m²
Operation modes		Max / Med / Low / Pollen / Sleep, Auto	Max / Med / Sleep
Voltage/frequency (V, Hz)		220-240, 50-60	220-240, 50-60
Power input (Max / Med / Low) (W)		48 / 28 / 4.0 (low)	50 / 30 / 13 (sleep)
Standby power (W)		1.3	0.6
Airflow (Max / Med / Sleep) (m³/hour)		480 / 288 / 60	180 / 120 / 60
Noise level (Max / Med / Sleep) (dB)		47 / 45 / 15	44 / 36 / 23
Special program mode		Plasmacluster spot / PM2.5 Monitor / Pollen / Clean ion shower (TA)	Clean ion shower (TA)
Auto restart		Yes*3	Yes*3
Child lock		Yes	No
Timer		Yes (on / off) (1-12h)	Yes (4-8h)
Filter type	Dust collection	HEPA*4	HEPA*4
	Deodorization	Yes	Yes
	Pre-filter	Yes	No
Filter life	Dust collection	Up to 2 years*5	Up to 2 years*5
	Deodorizing filter	Up to 2 years*5	Up to 2 years*5
Filter replacement indicator		Yes	Yes
Sensor	Odor	Yes	No
	Dust	Yes (High sensitive)	No
	Light	Yes	No
Clean sign indicator		Yes	No
Digital distplay		Yes (3 digits)	No
Light control button		No	Yes
Power cord length (m) approx.		2.0	2.0
Dimensions (W x H x D) (mm)		416 x 728 x 291	431 x 411 x 211
Net weight (kg)		10.6	4.2
Replacement filter	HEPA filter	FZ-J80HFE	FZ-F30HFE
	Deodorizing filter	FZ-J80DFE	FZ-F30HDE
Replacement unit		IZ-C90ME	—

Plasmacluster ion purification	Airborne microbes	Airborne mold, Airborne microbes, Airborne viruses, Dust mite remain allergens, Dust mite feces allergens, Ammonia odor
	Clinging odors	Cigarette odor, Body odor
Filter purification	Capture and reduction of growth	Airborne microbes, Viruses, Tree pollen, Dust mite remains, Dust mite feces
	Deodorizing	Pet odor, Body odor, Mold odor, Ammonia odor
	Capture	Airborne mold, Plant pollen, Tree pollen, Pet dander, Pet hair, Dust, Cigarette smoke, Mite dust, Diesel exhaust

*1 Recommended area: Calculated based on the NRCC (National Research Council of Canada). The NRCC applicable area is calculated based on the CADR of the GB/T18801-2015.
*2 The area in which approximately 7,000 ions can be measured per cm³ in the center of the room (at a height of approximately 1.2 meters from the floor) when the product is placed next to a wall and run at the maximum setting.
*3 The air purifier automatically resumes operation when power returns, even after a sudden power interruption, such as due to a circuit breaker.
*4 HEPA is defined by the JEM1467 standard of the Japan Electrical Manufacturers' Association Standard. The filter removes more than 99.97% of 0.3-micron dust particles.
*5 At a smoking rate of five cigarettes per day.
* The number in this technology mark indicates the approximate number of ions supplied into 1 cm³ of air, which is measured around the center of a room (at a height of 1.2 m above the floor) with the applicable floor area at the maximum airflow, when a Plasmacluster ion generator using a high-density Plasmacluster ion-generating device is placed close to a wall.

- The filter itself may produce an odor and need to be replaced after several months if the air purifier is used to reduce strong odors, such as cigarette smoke or grilled meat.
- Use the air purifier in combination with room ventilation if it is used for strong odors.
- Not all harmful substances in cigarette smoke (e.g., carbon monoxide) can be removed.
- Not all commonly occurring odors (e.g., pet odors) can be removed.

Design and specifications are current as of Dec. 2021, but are subject to change without prior notice. Actual colors may differ slightly from the colors shown in this brochure.

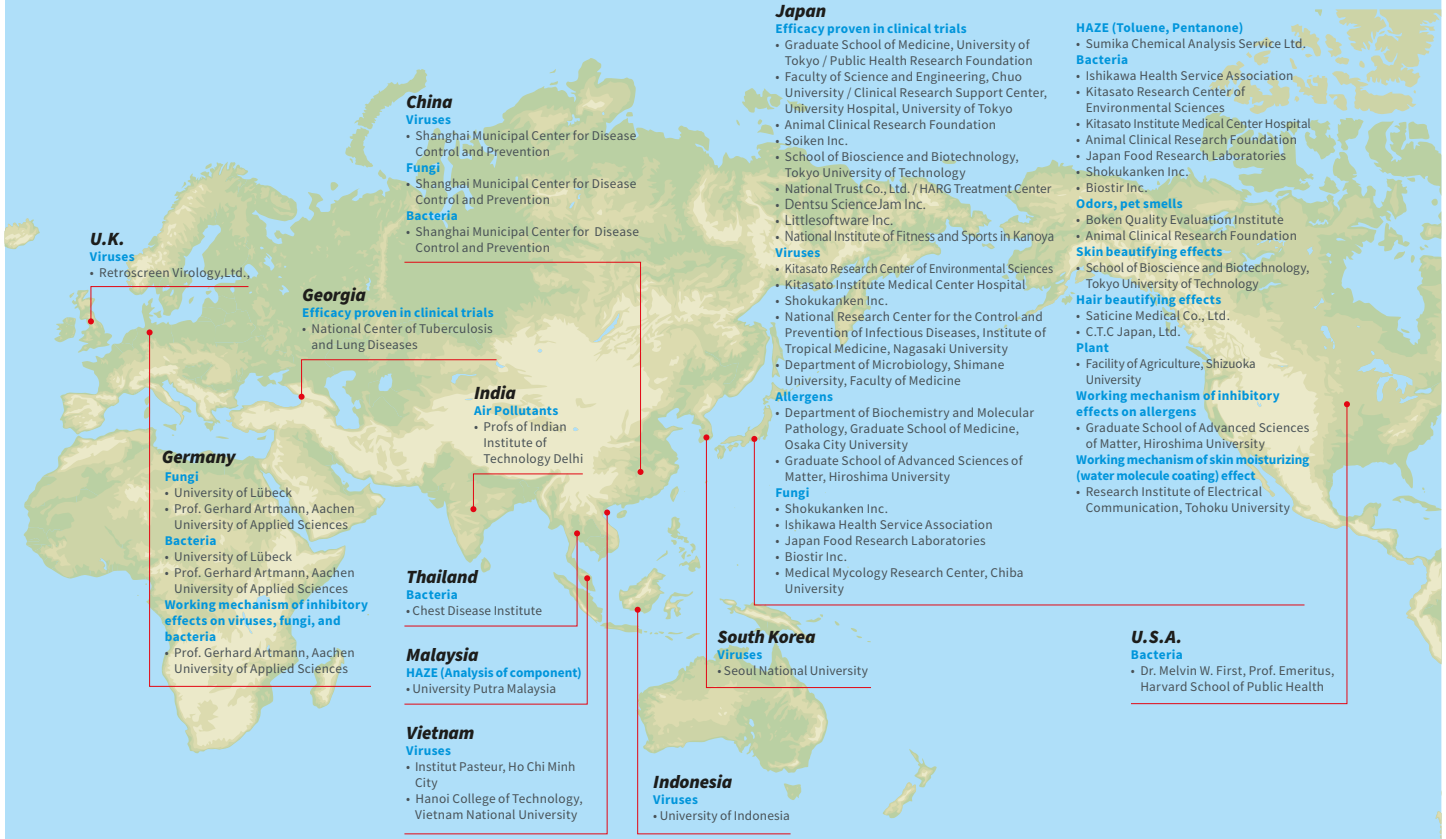
High-Density Plasmacluster Ions Remove Airborne Mold and Viruses

Plasma discharge generates and emits the same positive and negative ions that occur in nature. Plasmacluster technology is Sharp's original air purifying technology that removes airborne mold and viruses. The benefits have been proven by official test institutions in Japan and around the world.

Certified Over 35 Institutes and Organizations

CERTIFIED WORLDWIDE

PLASMACLUSTER—GAINING TRUST AND NEW CUSTOMERS AROUND THE WORLD
(TESTED BY OVER 35 INSTITUTES AND ORGANIZATIONS)



U.K.
Viruses
- Retroscreen Virology,Ltd.,

Georgia
Efficacy proven in clinical trials
- National Center of Tuberculosis and Lung Diseases

Germany
Fungi
- University of Lübeck
- Prof. Gerhard Artmann, Aachen University of Applied Sciences

Bacteria
- University of Lübeck
- Prof. Gerhard Artmann, Aachen University of Applied Sciences

Working mechanism of inhibitory effects on viruses, fungi, and bacteria
- Prof. Gerhard Artmann, Aachen University of Applied Sciences

China
Viruses
- Shanghai Municipal Center for Disease Control and Prevention

Fungi
- Shanghai Municipal Center for Disease Control and Prevention

Bacteria
- Shanghai Municipal Center for Disease Control and Prevention

India
Air Pollutants
- Profs of Indian Institute of Technology Delhi

Thailand
Bacteria
- Chest Disease Institute

Malaysia
HAZE (Analysis of component)
- University Putra Malaysia

Vietnam
Viruses
- Institut Pasteur, Ho Chi Minh City
- Hanoi College of Technology, Vietnam National University

Indonesia
Viruses
- University of Indonesia

South Korea
Viruses
- Seoul National University

Japan
Efficacy proven in clinical trials
- Graduate School of Medicine, University of Tokyo / Public Health Research Foundation
- Faculty of Science and Engineering, Chuo University / Clinical Research Support Center, University Hospital, University of Tokyo
- Animal Clinical Research Foundation
- Soiken Inc.
- School of Bioscience and Biotechnology, Tokyo University of Technology
- National Trust Co., Ltd. / HARG Treatment Center
- Dentsu ScienceJam Inc.
- Littlesoftware Inc.
- National Institute of Fitness and Sports in Kanoya

Viruses
- Kitasato Research Center of Environmental Sciences
- Kitasato Institute Medical Center Hospital
- Shokukanken Inc.
- National Research Center for the Control and Prevention of Infectious Diseases, Institute of Tropical Medicine, Nagasaki University
- Department of Microbiology, Shimane University, Faculty of Medicine

Allergens
- Department of Biochemistry and Molecular Pathology, Graduate School of Medicine, Osaka City University
- Graduate School of Advanced Sciences of Matter, Hiroshima University

Fungi
- Shokukanken Inc.
- Ishikawa Health Service Association
- Japan Food Research Laboratories
- Biostir Inc.
- Medical Mycology Research Center, Chiba University

HAZE (Toluene, Pentanone)
- Sumika Chemical Analysis Service Ltd.

Bacteria
- Ishikawa Health Service Association
- Kitasato Research Center of Environmental Sciences
- Kitasato Institute Medical Center Hospital
- Animal Clinical Research Foundation
- Japan Food Research Laboratories
- Shokukanken Inc.
- Biostir Inc.

Odors, pet smells
- Boken Quality Evaluation Institute
- Animal Clinical Research Foundation

Skin beautifying effects
- School of Bioscience and Biotechnology, Tokyo University of Technology

Hair beautifying effects
- Saticine Medical Co., Ltd.
- C.T.C Japan, Ltd.

Plant
- Facility of Agriculture, Shizuoka University

Working mechanism of inhibitory effects on allergens
- Graduate School of Advanced Sciences of Matter, Hiroshima University

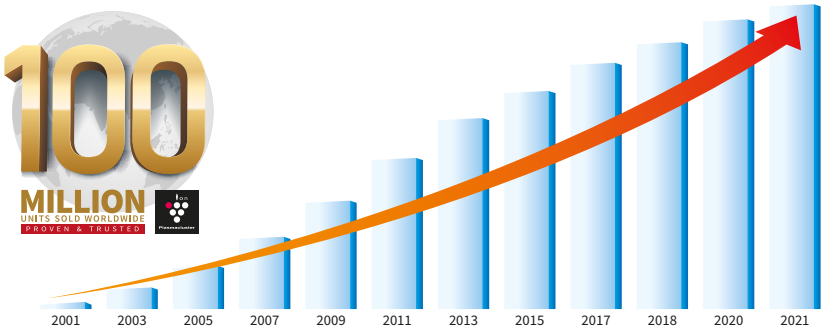
Working mechanism of skin moisturizing (water molecule coating) effect
- Research Institute of Electrical Communication, Tohoku University

U.S.A.
Bacteria
- Dr. Melvin W. First, Prof. Emeritus, Harvard School of Public Health

- Sharp does not guarantee the test results can be replicated in actual user situations.
- Plasmacluster Ion effectiveness will vary depending on ion density and product used.
- Plasmacluster and the Plasmacluster logo are trademarks or registered trademarks of Sharp Corporation.

Used in over 100 million products in 21 years

In the 21 years since its release, products equipped with Plasmacluster ions have exceeded the 100-million-unit mark. Sharp aims to bring the benefits of Plasmacluster ions to every air space.



● Total number of products equipped with a Sharp Plamacluster device and of Plasmacluster ion generating devices shipped in Japan and abroad from October 2000 to the end of October 2021.

* Design and specifications are current as of Dec. 2021, but are subject to change without prior notice.

SHARP

Sharp Corporation of New Zealand