DAIKIN



- Daikin products are manufactured for export to numerous countries throughout the world. Prior to purchase, please confirm with your local authorised importer, distributor and/or retailer whether this product conforms to the applicable standards, and is suitable for use, in the region where the product will be used. This statement does not purport to exclude, restrict or modify the application of any local legislation.
- Use only those parts and accessories supplied or specified by Daikin.
- Read the user's manual carefully before using this product. The user's manual provides important safety instructions and warnings. Be sure to follow these instructions and warnings.

If you have any enquiries, please contact your local importer, distributor and/or retailer.

Daikin Airconditioning (Hong Kong) Ltd.

17-18F, Futura Plaza, 111-113 How Ming Street Kwun Tong, Kowloon, Hong Kong. Tel : (852) 2570 2786 Fax: (852) 2807 2484





About the dust collection and deodorising capacity of air purifiers:

MC30YBFVM3 Streamer Air Purifier

30 type

- Not all harmful substances in cigarette smoke (carbon monoxide, etc.) can be removed.
- Not all odour components that emanate continuously (building material odours and pet odours, etc.) can be removed.

This product is not a medical device, medical treatment device or a therapeutic good.

This product is not intended to have any therapeutic use or to be used for the diagnosis, treatment, relief or prevention of illness If you have a health concern or are not feeling well, please consult a health care professional.





Streamer Air Purifier



STREAMER

Slim design with humidification

Compact design with powerful airflow

Compact and stylish design



MCK55VBFVM Double method



MC55VBFVM3 Double method



MC40VBFVM3



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Experimental Results of Daikin Streamer Technology

Daikin's Active Plasma Ion

Lineup

Slim design with humidification

Double method

MCK55VBFVM







Humidification	Dust collection		Deodorisation
			Capacity in turbo operation mode
Air purifi	ication	H	lumidifying capacity
Air purification only Airflow 5.5 m³/min.	Humidification + air purification Airflow 5.5 m²/min.		500 _{ml} *2
Applicable room a	rea $\sim 41 \text{m}^2 ^{*1}$		
Approximate room cleanin	g time 13.2m²/11min.*1		

Compact and stylish design







Approximate room cleaning time 13.2m²/19min. *1

• This model has no humidifying function.

Compact design with powerful airflow

Double method

MC55VBFVM3 MC40VBFVM3



With wireless remote controller



Dust collection	Deodorisation				
Capacity in turbo operation mod					
Air purification					
Air purification only Airflow $5.5_{\mathrm{m}^3/\mathrm{min.}}$					
Applicable room area					

 $\sim 41 \text{m}^2 \times 1$ Approximate room cleaning time 13.2m²/11min. *1

Capacity in turbo operation mode Air purification Air purification only Airflow 4.0 m³/min.

Applicable room area ~ 31m² *1

Approximate room cleaning time 13.2m²/15min. *1

• This model has no humidifying function.

- Note:
 *1 Calculated by test method based on Japan Electrical Manufacturers' Association Standard JEM1467.
 *2 Humidifying capacity by JEM1426 (electric humidifier) with turbo operation at temperature of 20°C and humidity of 30%.



Streamer

Scan here for more

DAIKIN Streamer Research Institute



Outside

Active plasma ion flow out

*MCK55 and MC55 models.

The plasma ion technology uses plasma discharge to release ions into the air, which combine with components of the air to form active species with strong oxidizing power like OH radical. They attach to the surface of fungi and allergens and decompose proteins in the air by oxidation.

Daikin's plasma ions have been proved safe. Safety concerning effect on skin, eyes, and respiratory

Testing organization: Life Science Laboratories, Ltd. Name of test: repeated-dose toxicity test

Test number: 12-II A2-0401

Mechanism of reduction by active plasma ions

Concentration: 25,000 ions/cm3

*1 The number of ions per 1cm3 of air blown into the atmosphere measured near the air outlet during operation with maximum airflow. Test conditions: temperature 25°C, humidity 50%.



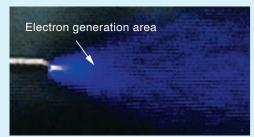


Inside

Streamer decomposes by suction

Streamer, a type of plasma discharge, decomposes hazardous chemical substances.

The decomposition power is comparable to thermal energy of about 100,000°C.*2



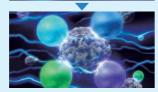
*2 Comparison of oxidation decomposition. This does not mean temperature will become high ■ Mechanism of decomposition by Streamer



Streamer emits high-speed electrons.



The electrons collide and combine with nitrogen and oxygen in the air to form four kinds of decomposing elements with decomposition power.



The decomposing elements provide decomposition power.

Three Steps to Decompose Harmful Substances

Powerful suction

Takes in dust over a wide area from 3 directions.



Effective capture of pollutants

Catches dust and pollutants effectively with an electrostatic HEPA filter.



Decomposition

Uses Daikin's Streamer technology to decompose harmful substances caught on the filter by oxidation.*1

Effect after nine hours in a space of about 200L



Placed an air purifier in a 1 m3 box with acetaldehyde as an exhaust gas-derived VOC and operated the air purifier. Test result: Confirmed an increase in concentration of generated product (CO2) when acetaldehyde was decomposed by Streamer (Evaluation by Daikin)

Test unit: MCK55S (Japanese model), a model equivalent to MCK55V series

Pollutants that can be collected and deodorised by filter



House dust



City exhaust gas (trichloroethylene,etc.)



Dog epidermis





(cedar,etc.)



VOC-type

epidermis

Cooking

Yellow dust











Indoor air pollutants (formaldehyde, etc.)



Cockroaches





Body odour

(feces and carcasses)

Diesel exhaust

particulates



Mould





Attached

Floating



Floating

mould







Battle harmful airborne substances using Streamer air purifiers.



1 Clash

Decomposes harmful substances on the dust collection filter by oxidation!

Harmful gaseous chemical substances attach to the surface of floating substances

(floating substance)



The dust collection filter attached harmful gases decomposes the harmful gases by oxidation. *2

Removes 99% of particles PM2.5 (Haze) between 0.1 µm and 2.5 µm^{*1} in size.

Entry of new particles from outdoors, for example by ventilation, is not considered.

"PM2.5" refers to general fine particulate matters sized 2.5µm or smaller. This air purifier has not been proved to remove very fine particles of less than 0.1µm. This product does not remove all harmful substances in the air. The test results are effects in a closed space of 32m3 and not in an actual operation space.



Test unit: Tested with MCK55S (Japanese model), a model equivalent to MCK55V series.

Test method: Japan Electrical Manufacturers' Association Standard JEM1467. Criterion: Remove 99% of fine particulate matters of 0.1 to 2.5µm in a closed space of 32m3 within 90 minutes. (Converted to a value in a test space of 32m3)

Exhaust gas

Decomposes harmful by oxidation.*2

Effect in a test space of 1 m3.



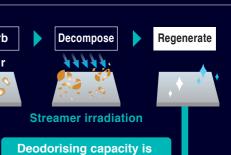
² Placed an air purifier in a 1 m³ box with acetaldehyde as an exhaust gas-derived VOC and operated the air purifier. Test result: Confirmed an increase in concentration of generated product (CO2) when acetaldehyde was decomposed by Streamer. (Evaluation by Daikin) Test unit: MCK55S (Japanese model), a model equivalent to MCK55V series.

2 Cycle

The deodorising filter absorbs and decomposes odour.

The deodorising capacity is maintained because the adsorbing capacity regenerates.

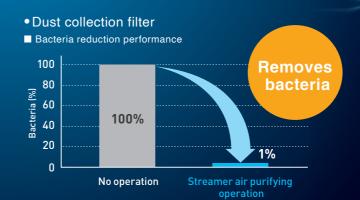
(Comparison with conventional Daikin products. Evaluation under conditions set by Daikin).*6



No need to change deodorising filters

3 Clean

Removes bacteria from dust collection filter*3, humidifying filter*4, and humidifying water.*5



Humidifying filter

maintained thanks to

regeneration.

Humidifying water Water wheel **Humidifying filter Humidifying tray**

Streamer unit

The 3 C's of Streamer

harmful substances 1.Clash on the dust collection filter by

2.CVCle filter absorbs and

Removes bacteria from dust collection filter *3, humidifying filter*4, and

- *3 Testing organization: Japan Food Research Laboratories. Test number: 15044988001-0201. Test method: Attached a test piece inoculated with bacteria liquid on the upstream side of a dust collection filter installed in an air purifier, and operated it in a test area of 25 m3. Counted the number of live bacteria after five hours. Test object: A type of bacterium. Object part: Dust collection filter. Test result: Reduced by more than 99% in five hours. Test unit: Tested with MCK55S (Japanese model), a model equivalent to MCK55V series (turbo operation).
- *4 (Removal of bacteria from humidifying filter) Works on objects caught by the humidifying filter. Testing organization: Japan Food Research Laboratories. Test number: 15044989001-0101
- Test method: Attached a test piece inoculated with bacteria liquid on the upstream side of a humidifying filter installed in an air purifier, and operated it in a test area of 25 m3. Counted the number of live bacteria after five hours. Object part: Humidifying filter. Test result: Reduced by more than 99% in five hours. Test unit: Tested with MCK55S (Japanese model), a model equivalent to MCK55V series (turbo operation).
- *5 (Reduction of bacteria in humidifying tray) Testing organization: Japan Food Research Laboratories. Test number: 15044985004-0101. Test method: Performance evaluation test by voluntary standard of Japan Electrical Manufacturers' Association (HD-133). Test object: Moulds and bacteria in humidifying water. Test result: Reduced by more than 99% in 24 hours. Test unit: Tested with MCK55S (Japanese model), a model equivalent to MCK55V series (turbo operation).

About the dust collection and deodorising capacity of air purifiers:

- Not all harmful substances in cigarette smoke (carbon monoxide, etc.) can be removed.
- Not all odour components that emanate continuously (building material odours and pet odours, etc.) can be removed.

*6 Placed the air purifier and an odour component, acetaldehyde, in a box of 21 m3 and operated the air purifier. Examined increase of concentration of product (CO2) generated by decomposition of acetaldehyde by Streamer (evaluation by Daikin). Test unit: Tested with MCK55S (Japanese model), a model equivalent to MCK55V series

This product can be used to improve the quality of the air by removing airborne hazardous chemical substances, allergens, mould, bacteria, and viruses, etc. However, this product is not intended for the creation of sterile environments or for the prevention pathogen infections.

This description relates to the Streamer Technology devised by Daikin, but not to this Air Purifier. Test results from use of the Streamer Technology are generated according to prescribed test methods conducted by Daikin. Although the Streamer Technology is contained within this Air Purifier, this does not mean that precisely the same results will be experienced using this Air Purifier. Actual results may differ depending on the conditions of product installation and use of the actual product, etc.

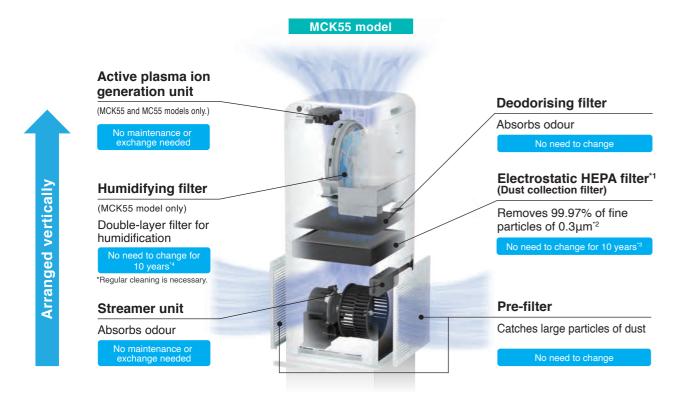
This product is not a medical device, medical treatment device or a therapeutic good.

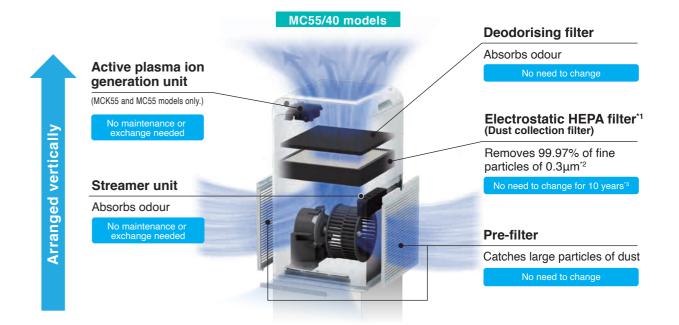
This product is not intended to have any therapeutic use or to be used for the diagnosis, treatment, relief or prevention of illness.

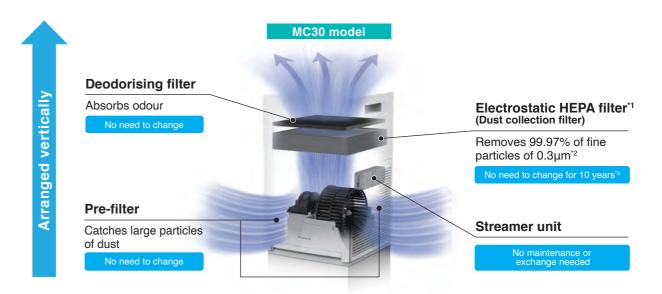
If you have a health concern or are not feeling well, please consult a health care professional.



Unique vertical structure







It may become necessary to change out items that usually do not require replacing due to environmental and operational conditions.

- *1 Test method based on Japan Electrical Manufacturers' Association Standard JEM1467.
- *2 This is removal performance of filter and not removal performance for entire room.
- *3 Verified by test method based on JEM1467. The standard assumes five cigarettes are smoked per day. Not all harmful substances in cigarette smoke (carbon monoxide, etc.) can be removed. Filter lifespan may vary depending on the operating conditions.
- *4 This is the standard replacement time until the humidifying capacity drops to 50% of the rated humidifying capacity, assuming that the filters are used 8 hours per day, 6 months per year, and are cleaned regularly following the operation manual.

 Replacement time may become shorter depending on the water quality and usage conditions.

About the dust collection and deodorising capacity of air purifiers:

- Not all harmful substances in cigarette smoke (carbon monoxide, etc.) can be removed.
- Not all odour components that emanate continuously (building material odours and pet odours, etc.) can be removed.

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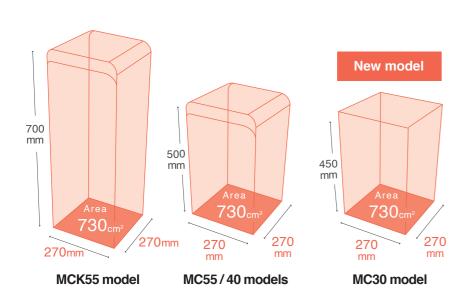
If you have a health concern or are not feeling well, please consult a health care professional.

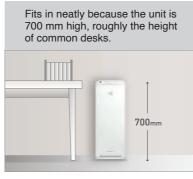
Promotion video for MCK55 at Daikin official YouTube site.

55/40/30_{type}

New Stylish and Compact Design

> Flexible choice of where to place the unit



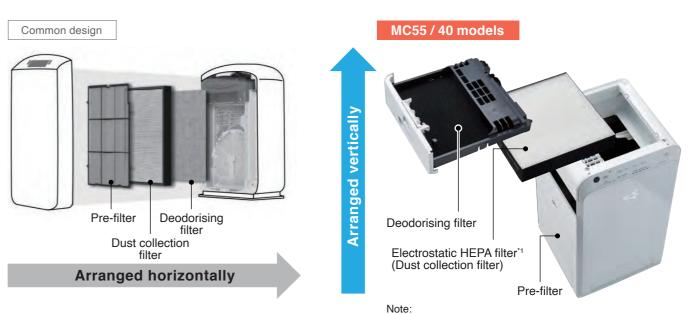




Only 27cm width & depth



Compact, effective and quiet thanks to the new, innovative structure



*1 Test method based on Japan Electrical Manufacturers' Association Standard JEM1467.

Powerful suction in 3 directions



Operation sound sensed by people is reduced

(Comparison with conventional Daikin products. In turbo operation)

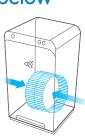
The key is the sound of airflow from the air outlet

Daikin succeeded in reducing the operation sound sensed by people by adopting a wide air outlet and positioning the fan below the filters for soundproofing effect.

> The fan is positioned below

Positioned farthest from people's ears.

The filters also provide a soundproofing effect, so the operation sound is not disturbing.



Streamer Air Purifier Humidifying 55 type Streamer Air Purifier 55/40/30 type

Scan here for more Promotion video for MCK55 at Daikin official YouTube site.



/55/40/30_{type}

Electrostatic HEPA filter *1

High-performance filter to catch fine particles of dust

Removes 99.97% of fine particles of 0.3µm *2



The filter collects dust efficiently with electrostatic forces.

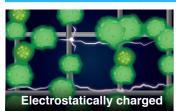
It is not prone to clogging compared with unelectrified HEPA filters which collect particles only by the fineness of the mesh.

Therefore, a larger amount of air can pass through the filter.

The filter can purify a larger amount of air!

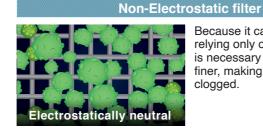
Comparison between Electrostatic HEPA filter*1 and Non-electrostatic filter

Electrostatic HEPA filter"

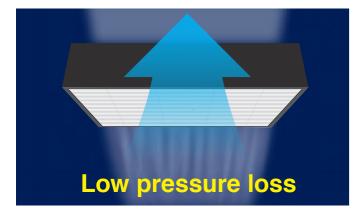


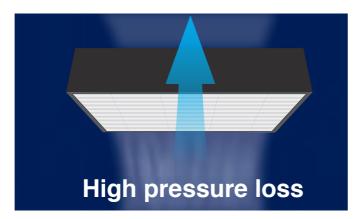
Filter fiber itself is charged with static electricity, and collects particles efficiently.

Doesn't clog easily because of low pressure



Because it catches particles relying only on mesh size, it is necessary to make mesh finer, making it easy to be clogged.





- *1 Test method based on Japan Electrical Manufacturers' Association Standard JEM1467.
- *2 This is removal performance of filter and not removal performance for entire room.

About the dust collection and deodorising capacity of air purifiers:

- Not all harmful substances in cigarette smoke (carbon monoxide, etc.) can be removed.
- Not all odour components that emanate continuously (building material odours and pet odours, etc.) can be removed.

Powerful humidification (MCK55 model only)

> Benefit of Humidification

· Protects the skin, the throat and the nostril from dryness.



 Protects against viruses by maintaining appropriate humidity of the room.



500 mL/h

> Select the target humidity from 3 levels > Indicates humidity of the room

(The target humidity is a rough estimation.)





> Eliminates bacteria on the humidifying filter *4

50%

Effect after five hours in a test space of about 25 m³. This is an effect in a test space and not a test result in an actual operation space. STREAMER

> Reduces bacteria in humidifying water by Streamer *5

The humidifying tray needs regular maintenance (once in about a week). This is not a verification result in an actual operation environment.

The humidifying tray is irradiated with Streamer as well as the humidifying filter to reduce bacteria in the water. By keeping the water and its surroundings clean, the air purifier provides clean air and humidity to the room.

Use tap water to fill the tank, and replace with fresh water every day. Using well water or water from water purifiers makes bacteria develop faster

Features for clean humidification

- The humidifying tray is equipped with a silver ion agent
- A water wheel system to keep the humidifying filter from being directly soaked in water



- *3 Humidifying capacity by JEM1426 (electric humidifier) with turbo operation at temperature of 20°C and humidity of 30%.
- *4 (Removal of bacteria from humidifying filter) Works on objects caught by the humidifying filter. Testing organization: Japan Food Research Laboratories. Test number: 15044989001-0101. Test method: Attached a test piece inoculated with bacteria liquid on the upstream side of a humidifying filter installed in an air purifier, and operated it in a test space of 25 m3. Counted the number of live bacteria after five hours. Object part: Humidifying filter. Test result: Reduced by more than 99% in five hours. Test unit: Tested with MCK55S (Japanese model), a model equivalent to MCK55V series (turbo operation).
- *5 (Reduction of bacteria in humidifying tray) Testing organization: Japan Food Research Laboratories. Test number: 15044985004-0101. Test method: Performance evaluation test by voluntary standard of Japan Electrical Manufacturers' Association (HD-133). Test object: Moulds and bacteria in humidifying water. Test result: Reduced by more than 99% in 24 hours. Test unit: Tested with MCK55S (Japanese model), a model equivalent to MCK55V series (turbo operation).

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Streamer Air Purifier Humidifying 55 type Streamer Air Purifier 55/40/30 type

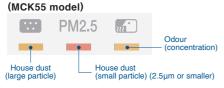
Scan here for more Promotion video for MCK55 at Daikin official YouTube site.

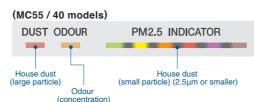


Convenience

> "Triple detection" sensor to quickly detect PM2.5

Equipped with a high sensitivity dust sensor that distinguishes small particles such as PM2.5 and larger particles of dust and reacts accordingly. Along with the odour sensor, "triple detection" of dust, PM2.5 and odour is provided.





> Choose from the various operation modes

- Auto Fan mode
- Anti-pollen mode
- Econo mode for energy saving
- Moist mode (MCK55 model only) Humidity is automatically adjusted to be gentle on the skin and throat.







> Equipped with a remote controller







Convenient for operation from a distant position.

> Easy cleaning

• Filter cleaning without opening the panel

Just vacuum with a cleaner. No need to open the panel to clean the filter.



Equipped with roll-away casters



 Easy-to-detach water tank (MCK55 model only)

The water tank is conveniently placed in a high position for easy detaching. The compact size of the tank makes it easy to replenish water in a sink or a wash basin



Haze mode (MC30 model only)

> Remove the fine particles (PM2.5) quickly and decompose harmful substances in the Haze.

Airflow will begin to operate at Turbo fan speed for 90 minutes with streamer discharge.

Then the airflow change to Standard fan speed with Streamer discharge until the termination of function



The Haze (PM2.5) test results and test methods have been acknowledged and certified by Universiti Malaya

Stage 1: Purification Test

Proven to fully cleanse air in a room!

Test Result *1:

Based on the actual operation of Haze mode at Turbo fan speed for the first 90 minutes of operation, the results show the air purifier has managed to fully cleanse the air within 90 minutes. Hence, 90 minutes for the first stage operation is proven to be sufficient.

Stage 1: Purification Test



*The graph is not retrieve from experiment result but design calculation

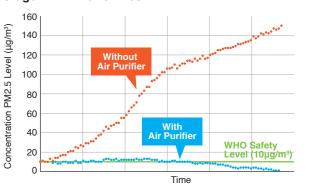
Stage 2: Infiltration Test

Effective to maintain a good air quality that we breathe in!

Test Result *2:

Based on the actual operation of Haze mode at Standard fan speed operating continuously, the results proved the ability to maintain the room in a healthy indoor air quality condition effectively.

Stage 2: Infiltration Test

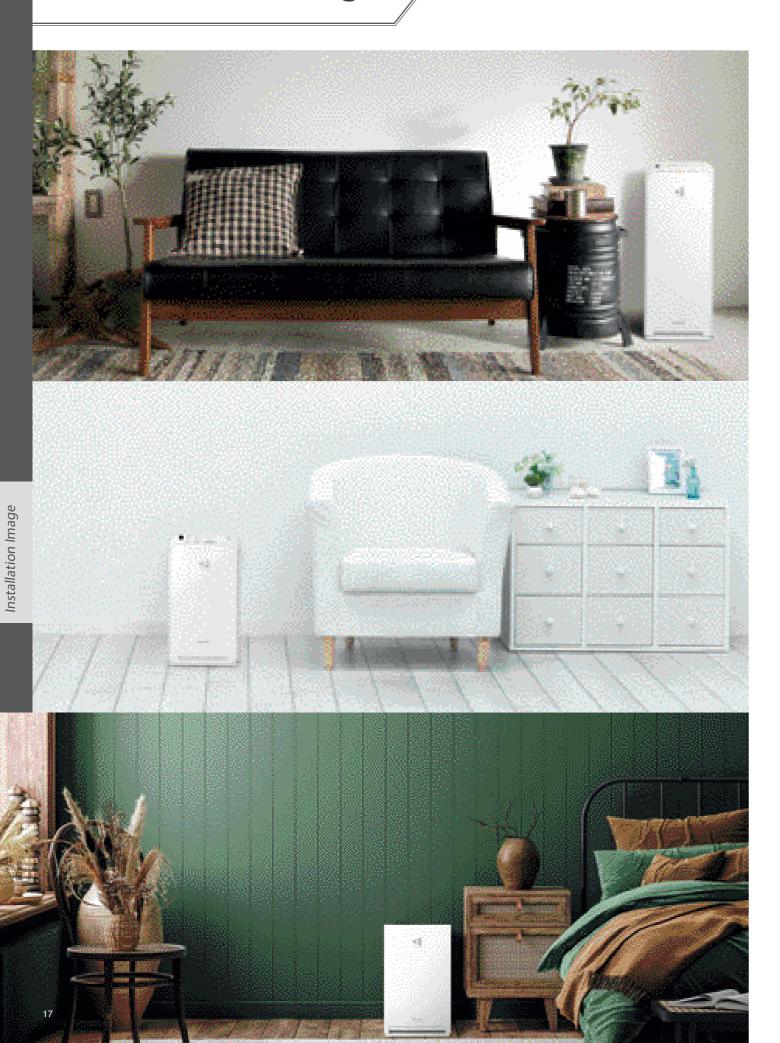


*The graph is not retrieve from experiment result but design calculation

Test Organisation: Certification Laboratory, Daikin Research & Development Malaysia (DRDM) in a collaboration with Universiti Malaya Test Report Number: SYS-2021-01

- *1 Test Method: Dust concentration level in a test space of 25.7m3, in accordance to JEM 1467 Standard, is measured to determnie the reduction of PM 2.5 dust particle size from hazardous levels stated in Air Pollution Index (API), to healthy levels based on the World Health Organization (WHO) Air Qualities Guideline: Global 2005. With the consideration of the effective room capacity of the unit, an operation period of 90 minutes with turbo fan speed is required to satisfy the test standard.
- *2 Test Method: An infiltration of polluted haze is allowed into the test space gradually. A continuous operation under Standard fan speed is used in a test space of 25.7m³, in accordance to JEM 1467 Standard. This infiltration test is used to demonstrate the cleansing ability of the second stage operation to maintain the dust concentration level in the room

Installation Image



Specifications

		St	reame	er Air F	Purifie	r Humi	difyin	j 55 ty	ре	Stre		Air Pur type	rifier	Stre		Air Pu type	rifier		
			Double method						Double method										
MODEL		With wireless remote controller				With wireless remote controller			Famous States of										
						MC	CK55	VBF	VM			МС	255V	BFV	М3	MC40VBFVM3			
								airflov ³ /mi								lax. airflow Om³/min.			
Colour											W	hite							
Applicable	room area*1	Air pu	urification						4	1 m ²					31 m²				
Approxima	te room cleani	ing tim	e*1					1	3.2 m ²	/ 11 m	in.	13.2m² / 15 min.							
Power sup	ply								1 Phas	e, 220	-240/i	220–2	30V, 50	0/60Hz	<u> </u>				
Plug shape)										BF	уре							
Mode				Air p Quiet	urifyin Low	g opera	ation Turbo	Hum Quiet	idifyin Low	g opera Standard	ation Turbo	Quiet	Low		urifyin Turbo	g oper Quiet		Standard	Turbo
Airflow rate)		m³/min.	0.9	2.0	3.2	5.5	1.7	2.4	3.2	5.5	1.1	2.0	3.2	5.5	1.1	1.8	2.8	4.0
Power cons	sumption		W	7	10	17	56	11	14	19	58	8	10	15	37	7	9	13	23
Sound pres	ssure level		dB	19	29	39	53	25	33	39	53	19	29	39	53	19	27	36	49
Humidifica	tion*2		mL/h					(200)	(240)	(300)	500								
Dimension	s		mm					270 × E th cast						H50	0 × W	270 × [0270		
Weight			kg	9.5 (Without water) 6.8															
Dust collec	tion filter			Electrostatic HEPA filter ⁻³															
Humidifyin	g method					Evapo	ration	type E	lement										
Tank capac	city			About 2.7L ——															
		Dust	collection				(F	urchas	se of ne			4E (1 s eeded		bout 10) years	S)*4			
Optional accessories	Replacement filter	Deod	orising																
		Humi	difying	KNME080A4E (2 sheets of 1 set) (Purchase of new filters is needed after about 10 years)															

- Note:
 *1 Calculated by test method based on Japan Electrical Manufacturers' Association Standard JEM1467.
- *2 Humidifying capacity by JEM1426 (electric humidifier) at temperature of 20°C and humidity of 30%. The values in parentheses are for reference purposes only.
- *3 Test method based on Japan Electrical Manufacturers' Association Standard JEM1467.
- \star4 Verified by test method based on JEM1467. The standard assumes five cigarettes are smoked per day. Not all harmful substances in cigarette smoke (carbon monoxide, etc.) can be removed. Filter lifespan may vary depending on the operating conditions.
- *5 Verified by test method based on JEM1467. The standard assumes ten cigarettes are smoked per day. Not all harmful substances in cigarette smoke (carbon monoxide, etc.) can be removed. Filter lifespan may vary depending on the operating conditions.

Specifications

Streamer Air Purifier 30 type MODEL MC30YBFVM3 Max. airflow 3.0m³/min. Colour White Applicable room area*1 | Air purification 23 m² Approximate room cleaning time*1 13.2m² / 19 min. 1 Phase, 220-240/220-230V, 50/60Hz Power supply Plug shape BF type Air purifying operation Mode 1.0 2.0 3.0 Airflow rate m³/min. 25 8 15 Power consumption W 27 dB Sound pressure level Humidification mL/h Dimensions mm H450 × W270 × D270 Weight kg Dust collection filter Electrostatic HEPA filter*3 Humidifying method Tank capacity BAFP500A (1 sheet) Dust collection (Purchase of new filters is needed after about 10 years)*4 Optional Replacement accessories Deodorising Humidifying

About the dust collection and deodorising capacity of air purifiers:

- Not all harmful substances in cigarette smoke (carbon monoxide, etc.) can be removed.
- Not all odour components that emanate continuously (building material odours and pet odours, etc.) can be removed.

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This product is not intended to have any therapeutic use or to be used for the diagnosis, treatment, relief or prevention of illness. If you have a health concern or are not feeling well, please consult a health care professional.

Functions

		MCK55VBFVM	MC55VBFVM3	MC40VBFVM3	MC30YBFVM3
	Humidification		_		
1	Humidity sensor		_	_	_
2	Dust (PM2.5/dust) and odour sensor lamps				_
3	Dust and odour sensor lamps	_	_	_	_
4	Streamer discharge				
5	Active plasma ion			_	_
6	Electrostatic HEPA Filter*1				
7	Electric dust collection	_	_	_	_
8	Pleated dust collection filter	_	_	_	_
9	Titanium apatite deodorising filter	_	_	_	_
10	Deodorising filter				
11	Moist mode		_	_	_
12	Econo mode				_
13	Auto fan mode				_
14	Anti-pollen mode				_
15	Sleep mode	_	_	_	_
16	Turbo mode				
17	Haze mode	_	_	_	
18	Off timer	_	_	_	_
19	Child proof lock			_	
20	Brightness adjustment				
21	Auto-restart after power failure				
22	Stabilizer free				

Functions

Humidity sensor

Humidity is detected and shown by an easy-to-understand indicator.

2 Dust (PM2.5/dust) and odour sensor lamps

"Triple detection" is performed by a dust sensor (which distinguishes small particles, such as PM2.5 and larger particles of dust, and reacts accordingly) and an odour

B Dust and odour sensor lamps

Dust and odours are detected and shown in 3 easy-to-understand colours to indicate the level.

4 Streamer discharge

This function quickly decomposes odours and allergens, etc., with high speed electrons that have a powerful ability to oxidize.

5 Active plasma ion

The active plasma ion technology decomposes odours and allergens in the air by plasma ions with strong oxidizing power.

6 Electrostatic HEPA filter*1

There is a high-performance filter that catches 99.97% of 0.3µm fine particles.*2

Electric dust collection

Dust and pollen are collected by charging them positively and using the electrostatic dust collection filter charged negatively.

Pleated dust collection filter

Very economical, the air purifier comes standard with 5 replacement filters. You will not have to buy filters for 10 years (1 filter can be used for 2 years).

Titanium apatite deodorising filter

Odours and allergens are thoroughly adsorbed by the titanium apatite and then removed.

10 Deodorising filter

Odours are caught on the deodorising filter. The air purifier utilizes streamer to decompose these odours and adjuvants on the filter.

Moist mode

Automatic control maintains relatively high humidity that is gentle to the throat and the skin.

Econo mode

Operation automatically switches only between "Quiet" and "Low" modes in accordance with the degree of polluted air

Auto fan mode

The air purifier is run, without wasteful operation, only in accordance with the level of pollutants in the air, which is detected by the sensor.

Anti-pollen mode

Switching between "standard" and "low" modes to create a gentle turbulence, pollen is caught before it lands on the floor.

B Sleep mode

Operation automatically switches only between "Quiet" and "Low" modes in accordance with how polluted the air is. This is recommended for times such as when sleeping.

Turbo mode

This convenient mode provides high-power operation to quickly clean the air in a room when, for example, you come home or when you have guests over.

Haze mode

The dust absorption capacity at a Turbo fan speed for 90 minutes and change to a Standard fan speed with a Streamer discharge to fast cleanse the indoor air.

Off timer

Operation stop time can be set.

(P) Child proof lock

This can be used to prevent small children from mishandling the air purifier.

Brightness adjustment

The brightness of the indicator panel lamp can be adjusted.

Auto-Restart after Power Failure

The air purifier memorises the settings for mode, airflow, etc., and automatically returns to them when power is restored after a power failure.

Stabilizer free

Stabilizer free operation protects the vital components of machine from power fluctuations. With this function installing stabilizer becomes needless (voltage range protection: 180~264V).

If power fluctuation is beyond the limit mentioned then a stabilizer is required.

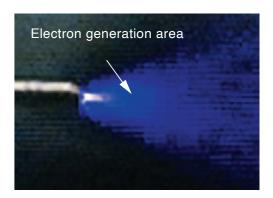
Experimental Results of Daikin Streamer Technology



"Streamer Discharge" is a type of plasma discharge which generates high speed electrons that combine with oxygen and nitrogen in the air and turn into active species with strong oxidative decomposition power and thereby eliminate allergens such as mould, mites (droppings and dead mites), and pollen, and hazardous chemical substances such as formaldehyde. Compared to standard plasma discharge (glow discharge), its speed of oxidative decomposition is over 1000 times greater with the same electrical power.

The decomposition power is comparable to thermal energy of about 100.000°C.*1

*1 Comparison of oxidation decomposition. This does not mean temperature will become high.



These are effects in a Streamer test space and not verification results in an actual operation space.

Experiment results of the Streamer technology that have been verified so far.



Viruses

Test target	Testing organaization	Test method	Report date
Norovirus	Kobe University Graduate School	ELISA method	12-Jan-2007
Avian influenza virus (Type A-H5N1)	Vietnam National Institute of Hygiene and Epidemiology	CPE and TCID50	16-Apr-2009
Influenza virus (Type A-H1N1)	Kitasato Research Center for Environmental Science	CPE and TCID50	31-Jul-2009
Influenza virus (Type A-H3N2)	Shanghai City Center for Disease Control and Prevention, etc.	CPE and TCID50	8-Feb-2010
RS virus	Wakayama Medical University	CPE and TCID50	13-Apr-2012
Adenovirus		CPE and TCID50	
Coxsackievirus	Kitasato Research Center for Environmental Science	CPE and TCID50	
Enterovirus		CPE and TCID50	23-Jun-2017
Echovirus		CPE and TCID50	
Measles		CPE and TCID50	
Mouse Norovirus	The University of Tokyo Graduate School	CPE and TCID50	11-Oct-2018
Mouse Coronavirus	The University of Tokyo Graduate School	Plaque assay	28-Apr-2020
Novel Coronavirus (SARS-CoV-2)	Okayama University of Science	CPE and TCID50	8-Jul-2020

This result was obtained by using a Streamer discharge device for testing in lab conditions. The effect of products equipped with Streamer technology or results in actual use environments may differ.

^{*1} Test method based on Japan Electrical Manufacturers' Association Standard JEM1467

^{*2} This is removal performance of filter and not removal performance for entire room.

Scan here for mo **DAIKIN Streamer**

Research Institute

Test target	Testing organaization	Test method	Report date
Escherichia coli		Pour plate culture method	8-Apr-2004
Staphylococcus aureus	Japan Food Research Laboratories	Pour plate culture method	8-Apr-2004
Enterotoxin		ELISA method	25-Aug-2004
Tubercle bacilli	Kitasato Research Center for Environmental Science	Plaque assay	8-Mar-2010
Vancomycin-resistant enterococci (VRE)		Pour plate culture method	19-Feb-2010
Methicillin-resistant Staphylococcus aureus (MRSA)		Pour plate culture method	19-Feb-2010
Pseudomonas aeruginosa	Japan Food Research Laboratories	Pour plate culture method	12-Apr-2010
Bacillus, Serratia, and Arthrobacter		Pour plate culture method	29-Sep-2010
Escherichia coli		Pour plate culture method	10-Sep-2018
Moraxella bacteria		Pour plate culture method	10-Jun-2019



Test target	Testing organaization	Test method	Report date
Mold (Black mold)	Japan Food Research Laboratories	Pour plate culture method	28-Sep-2004



<u>σ</u>				
Test target	Testing organaization	Test method	Report date	
Molds and mites (feces and carcasses)	Wakayama Medical University	Observation by electron microscope, ELISA method	14-Sep-2004	
Pollen + exhaust gas + PM2.5	Yamagata University under the supervision of Professor Shirasawa,	IgE antibody test, ELISA method	8-Nov-2017	
Mites (feces and carcasses) + cedar pollen	Tohoku Bunka Gakuen University	ELISA method	8-Nov-2017	
Pollens (16 kinds)	L.S.L. Asaka Research Laboratory under the supervision of Project Professor Kusakabe, graduate school of the University of Tokyo	ELISA method	23-Jan-2020	

Hazardous gases

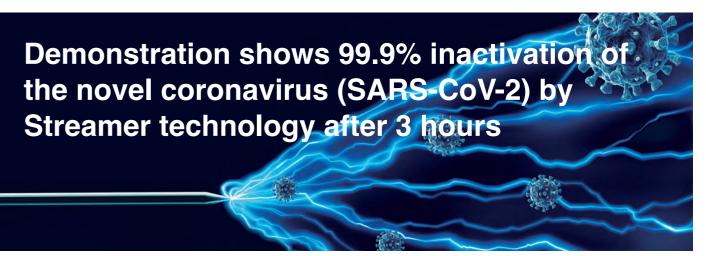
Test target	Testing organaization	Test method	Report date	
Adjuvant suppression effect (DEP)	Wakayama Medical University National Institute for Environmental Studies	ELISA method	1-Nov-2005	
Adjuvant (VOC)	Tohoku Bunka Gakuen University	Attenuation method	8-Dec-2006	

This product can be used to improve the quality of the air by removing airborne hazardous chemical substances, allergens, mould, bacteria, and viruses, etc. However, this product is not intended for the creation of sterile environments or for the prevention pathogen infections.

This description relates to the Streamer Technology devised by Daikin, but not to this Air Purifier.

Test results from use of the Streamer Technology are generated according to prescribed test methods conducted by Daikin. Although the Streamer Technology is contained within this Air Purifier, this does not mean that precisely the same results will be experienced using this Air Purifier. Actual results may differ depending on the conditions of product installation and use of the actual product, etc.

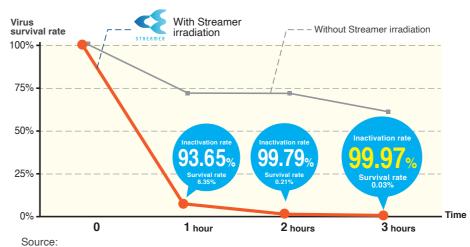
Demonstration of the inactivating effects of Streamer technology on the novel coronavirus (SARS-CoV-2)



Experimental Results

Daikin Industries, Ltd., in collaboration with a group of research professors led by Professor Shigeru Morikawa from the Department of Microbiology in the Faculty of Veterinary Medicine at the Okayama University of Science, has demonstrated the inactivating effects of Streamer technology on the novel coronavirus (SARS-CoV-2).

In the test, Streamer irradiation inactivated SAR-CoV-2 by 93.7% after 1 hour, 99.8% after 2 hours, and more than 99.9% after 3 hours.



"Study report on the inactivation effect of plasma ion generator (Daikin Streamer) on SARS-CoV-2" written by Shigeru Morikawa, Department of Veterinary Medicine, Microbiology Course, Okayama University of Science.

Test Organization

Testing was performed by a research group at the Department of Microbiology in the Faculty of Veterinary Medicine from the Okayama University of Science and was led by Professor Shigeru Morikawa.

Test Method

Two acrylic boxes of about 31L were mounted inside a safety cabinet. One box was equipped with a Streamer discharge device, and the other box was not. A see-saw rocking motion shaker was placed in each box, and a six-well plate was placed on top of the motion shaker. Virus solution measuring 0.5 ml was put into each well of the plates, and Streamer irradiation was performed while agitating the solution using the motion shaker (approximately 12 times per minute). Virus solution was collected from two wells every hour for three hours, and viral load was measured. The viral load of SARS-CoV-2 was quantified by the TCID50 method using Vero E6 / TMPRSS2 cells.

This result was obtained by using a Streamer discharge device for testing in lab conditions. The effect of products equipped with Streamer technology or results in actual use environments may differ.

This result was obtained by using a Streamer discharge device for testing in lab conditions. The effect of products equipped with Streamer technology or results in actual use environments may differ

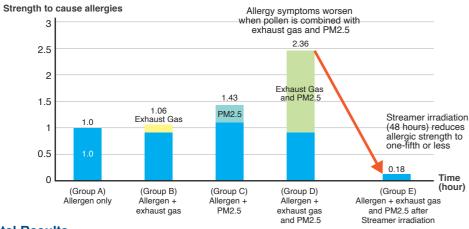
Experimental Results of Daikin Streamer Tech nology



Simultaneous decomposition of pollen + exhaust gas and PM2.5 which aggravate hay fever

Demonstration test results confirmed that Streamer technology decomposes cedar pollen. At the same time, it also decomposes exhaust gas (diesel exhaust particles) and PM2.5, which aggravate hay fever, and dramatically reduces the intensity of allergic reactions.

Simultaneous decomposition of pollen + exhaust gas and PM2.5 reduces allergenic strength by 92.4%



Experimental Results

In the test, the allergenic strength of Group D, which had exhaust gas and PM2.5 added to the allergen, was 2.36 times higher than Group A, which contained only the pollen allergen. This suggests that the simultaneous administration of a mixture of exhaust gas and PM2.5 enhanced the immune reaction that causes allergy symptoms such as hay fever.

On the other hand, the allergenic strength of Group E, which was exposed to the Streamer for 48 hours, was reduced by 92.4% compared to Group D.

Test Organization

Demonstration test was performed at Yamagata University under the supervision of Professor Nobuyuki Shirasawa, Tohoku Bunka Gakuen University.

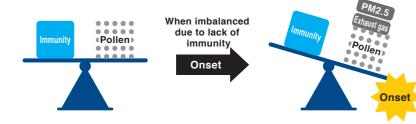
Test Method

A comparative experiment was performed on 3 groups of mice. Allergen only (Group A), allergen + exhaust gas (Group B), allergen + PM2.5 (Group C), allergen + exhaust gas and PM2.5 (Group D), allergen + exhaust gas and PM2.5 after the Streamer irradiation (Group E), were administered respectively. Administration to mice was continued every two weeks. Eight weeks later, the mice were tested for blood concentration of the IgE antibody 1. As an alternative to pollen, ovalbumin was used as the allergen since it is a substance typically used in immunity experiments.

- *1: When a reaction with an allergen occurs in the body, an IgE antibody that can bind only to the allergen is produced, and when the reentered allergen reacts with the IgE antibody, various allergic symptoms are caused. Since it is detected only in a very small amount in healthy people, it is generally used for immunological tests.
- Hay fever development

Adjuvant substances that aggravate allergy symptoms may adhere to pollen and upset the previously maintained balance of immunity and pollen, increasing the risk of developing hay fever.

Image of hay fever development



This result was obtained by using a Streamer discharge device for testing in lab conditions.

The effect of products equipped with Streamer technology or results in actual use environments may differ.

Decomposes molds and mites (feces and carcasses) and suppresses the causes of allergies.

Demonstration test results confirmed that Streamer technology decomposes molds and mites (feces and carcasses) and suppresses the causes of allergies.

Demonstration of mold

Picture of mold





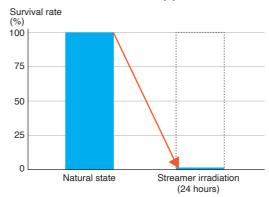
Test Organization

Demonstration test was performed at Wakayama Medical University.

Test Method

"Molds" were placed on the electrodes of a Streamer discharge unit where they were exposed to Streamer discharge for 15 minutes and photographed with an electron microscope.

Demonstration of mold suppression



Experimental Results

Demonstration test results confirmed that 99.9% of the molds was suppressed in 24 hours by Streamer irradiation.

Test Organization

Demonstration test was performed at Japan Food Research Laboratories.

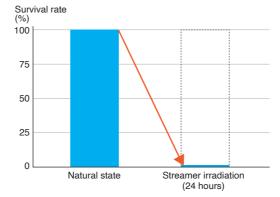
Test Method

A test piece in which the bacterial solution was cultured was placed in a container, the test Streamer discharge device was operated, and the viable cell count was measured after 24 hours.

Note

It is important to show that this could only suppress 99.9%, but not 100%, which might lead the misunderstanding to the customers.

Demonstration of mite allergy suppression (feces and carcasses)



Experimental Results

Demonstration test results confirmed 99.6% suppression of mite allergy (feces and carcasses) after 24 hours of Streamer irradiation.

Test Organization

Demonstration test was performed at Wakayama Medical University.

Test Method

Allergen analysis was confirmed by ELISA method using a test Streamer discharge device.

Note

It is important to show that this could only suppress 99.9%, but not 100%, which might lead the misunderstanding to the customers.

Relationship between molds, mites, and allergies

Since both molds and mites prefer a moist environment, they breed when humidity is high. Moreover, because mites in the room feed on molds, mites are more likely to occur in places where molds breed. When these molds and mite feces and carcasses contact human skin or are inhaled, they cause various allergy symptoms such as atopic dermatitis, asthma, rhinitis, and itchy eyes.

This result was obtained by using a Streamer discharge device for testing in lab conditions. The effect of products equipped with Streamer technology or results in actual use environments may differ.

Experimental Results of Daikin Streamer Tech nology



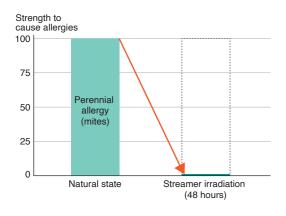
Decomposes the house dust (mite feces and carcasses) that causes perennial allergy symptoms

Demonstration test results confirmed that Streamer technology decomposes the house dust (mite feces and carcasses) that causes perennial allergies. It was also shown that the combination of perennial and seasonal allergies can aggravate or increase the likelihood of developing allergy symptoms. However, using Streamer to decompose these causative substances helps prevent allergy symptoms from developing.

Suppression of allergy symptoms caused by mites (feces and carcasses)

Experimental Results

Demonstration test results confirmed that Streamer irradiation is effective in suppressing 99% or more of the allergy symptoms caused by mites (feces and carcasses) in 48 hours.



Test Organization

Demonstration test was performed at Yamagata University under the supervision of Professor Nobuyuki Shirasawa, Tohoku Bunka Gakuen University.

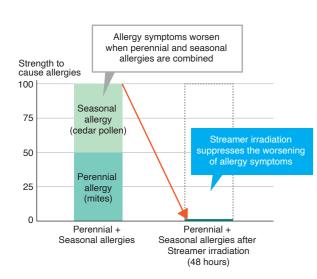
Test Method

House dust mite antigen (Dermatophagoides pteronyssinus), a typical causative agent of perennial allergies, was irradiated by Streamer at different times. The inactivation rate (the rate of loss of allergic ability) was measured by the allergen activity before and after irradiation by the ELISA method (a method of detecting and quantifying the ability of an allergen to bind to an antibody by using an enzymatic reaction).

Suppression of allergy symptoms caused by mites (feces and carcasses) + cedar pollen

Experimental Results

Demonstration test results confirmed that Streamer irradiation is effective in suppressing 99% or more of the deterioration of allergy symptoms caused by mites (feces and carcasses) and cedar pollen in 48 hours.



Test Organization

Demonstration test was performed at Yamagata University under the supervision of Professor Nobuyuki Shirasawa, Tohoku Bunka Gakuen University

Test Method

House dust mite antigen (Dermatophagoides pteronyssinus), a typical causative agent of perennial allergies, and cedar pollen antigen, a typical causative agent of seasonal allergies, were irradiated by Streamer at different times. The inactivation rate (the rate of loss of allergic ability) was measured by the allergen activity before and after irradiation by the ELISA method (a method of detecting and quantifying the ability of an allergen to bind to an antibody by using an enzymatic reaction).



This result was obtained by using a Streamer discharge device for testing in lab conditions. The effect of products equipped with Streamer technology or results in actual use environments may differ.

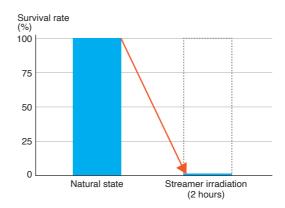
Decomposes and suppresses Moraxella bacterium, the cause of damp odor for laundry

The Moraxella bacterium is known to be the cause of the unpleasant damp odor that occurs when drying clothes indoors. Research has confirmed that Streamer technology decomposes and suppresses the bacteria causing this damp odor.

Demonstration of suppression of Moraxella bacterium Bacillus (causative agent of the laundry's damp odor)

Experimental Results

Demonstration test results confirmed that Moraxella bacterium (causative agent of the laundry's damp odor) was 99.8% decomposed and suppressed in 2 hours after Streamer irradiation.



Test Organization

Demonstration test was performed at Japan Food Research Laboratories.

Test Method

A sample containing 2 ml of the test bacterial solution in a petri dish (φ60 mm) was left to stand in the Streamer generator. The suppression effect was obtained from the results of measuring the number of bacteria after 1, 2, 3, 4, and 6 hours. The Streamer discharge device and test bacteria were provided by Daikin. This was measured 3 times.

From the above image, it seems like the graph is incomplete and not properly factored-in with descriptions.

To suppress laundry's damp odor, it is ideal to dry it within 5 hours!

The most important factor for preventing a damp odor when hanging laundry to dry indoors is the "time elapsing from the end of washing to the end of drying." Because Moraxella bacteria explosively grows after about 5 hours, you need to dry laundry within 5 hours of washing so that you can largely suppress a damp odor. The trick to drying clothes indoors is to first hang them in a well-ventilated place. Many people hang laundry on a curtain rail, but that is the worst place to hang laundry since moisture and germs naturally accumulate near the window. This makes it necessary to devise an effective method for hanging clothes.

"Arch drying" is a method in which wet clothes hang on a square hanger in an arch pattern with the long-hanging clothes placed at both ends and the short-hanging clothes placed in the middle. "Ghost drying" is a method in which the sleeves of long-sleeved shirt rest on a separate hanger. In addition to these methods, using a dehumidifier or air conditioner equipped with an air clear

combat bacteria growth.

People worried about laundry odor are encouraged to use t



This result was obtained by using a Streamer discharge device for testing in lab conditions. The effect of products equipped with Streamer technology or results in actual use environments may differ.

Daikin's Active Plasma Ion Technology

The plasma ion technology uses plasma discharge to release ions into the air, which combine with components of the air to form active species with strong oxidizing power like OH radical. They attach to the surface of fungi and allergens and decompose proteins in the air by oxidation.

Daikin's plasma ions have been proved to be safe. Safety concerning effect on skin, eyes, and respiratory organs Testing organization: Life Science Laboratories, Ltd.

Concentration: 25,000 ions/cm^{3 *1}

Name of test: repeated-dose toxicity test

Test number: 12-II A2-0401

Assumed mechanism of elimination



Image is for illustrative purposes

*1 The number of ions per 1cm3 of air blown into the atmosphere measured near the air outlet during operation with maximum airflow.

Test conditions: temperature 25°C, humidity 50%

These are effects in an active plasma ion test space and not verification results in an actual operation space.

Reduction of attached fungi Fungus eliminating effect Without active plasma ions With active plasma ions

Test name: test of resistance to fungi. Testing organization: Japan Spinners Inspecting Foundation.

Test result: After cultivation in a 9L container according to Japanese Industrial Standard JISZ2911, generation of fungi was reduced to less than half.

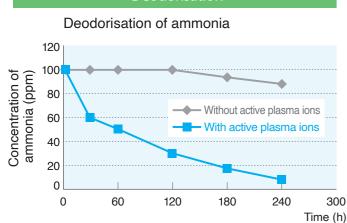
Reduction of allergens Change in concentration of allergen of cedar pollen over time Cryj1 concentration (ng/ml) 50 ── Without active plasma ions ── With active plasma ions 30

20 10 0 Time (h)

Test name: Test of reduction of allergen of cedar pollen. Testing organization: ITEA/Institute of Tokyo Environmental

Test result: Allergen of cedar pollen in a 45L container was reduced by more than 95.5% in about 8 hours.

Deodorisation

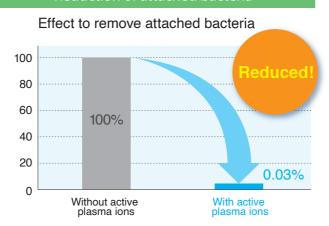


Test name: Deodorisation test.

Testing organization: Japan Spinners' Inspecting Foundation Test number: 200097-1.

Test result: In a 5L container, ammonia was reduced by 92.3% in about 240 minutes.

Reduction of attached bacteria



Test name: antibacterial test.

Testing organization: Japan Spinners' Inspecting Foundation. Test number: 028669.

Test result: In a 9L container, reduced by more than 99.97% in 24 hours

Plasma Ion