

Ionic care

Facion
Facion



deodorize
Deodorization

Removing
bacteria
Virus removal

Applicable
floor area
10m² - **40m²**

Air Refresh Circulator Renaissance

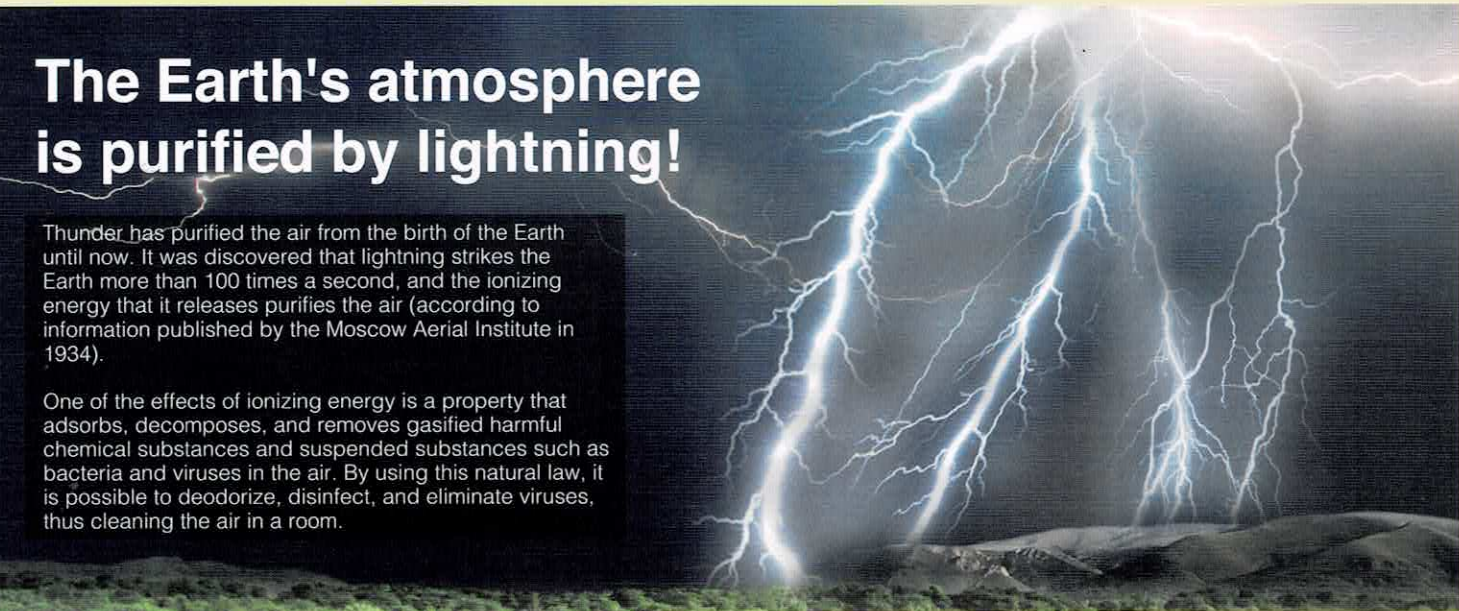
Air safety declaration

Facion is an artificial lightning generator

The Earth's atmosphere is purified by lightning!

Thunder has purified the air from the birth of the Earth until now. It was discovered that lightning strikes the Earth more than 100 times a second, and the ionizing energy that it releases purifies the air (according to information published by the Moscow Aerial Institute in 1934).

One of the effects of ionizing energy is a property that adsorbs, decomposes, and removes gasified harmful chemical substances and suspended substances such as bacteria and viruses in the air. By using this natural law, it is possible to deodorize, disinfect, and eliminate viruses, thus cleaning the air in a room.

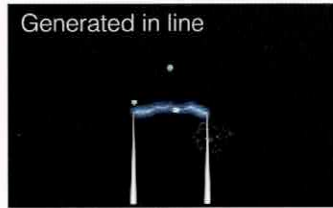


Conventional product

Facion

Ion generation system

Generated in line



Generated as a surface

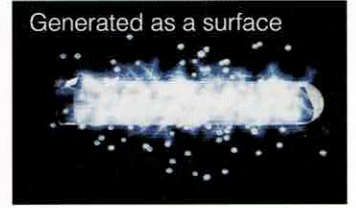


Image of ion-filled space



Difficult to fill real space



Can fill real space

Excellent sterilization effect

Strong decomposition and removal of VOCs and offensive odors

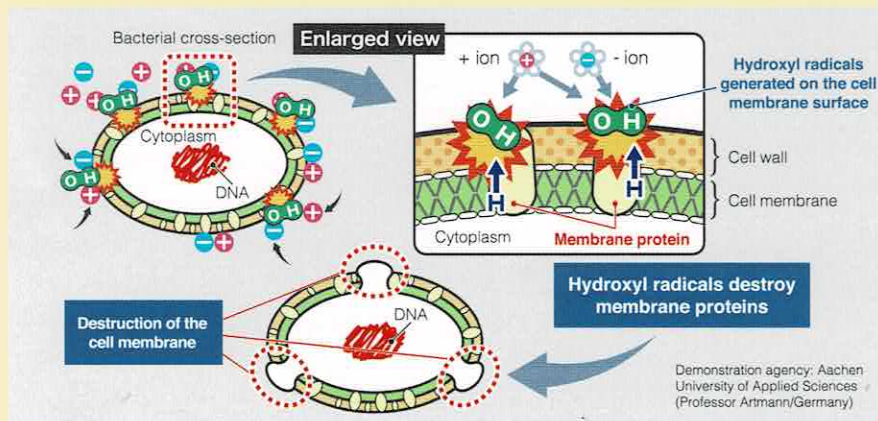
Decomposes and removes gasified hazardous materials and offensive odors using ionization energy.

Major offensive odors

Classification	General bacterial count	Mold count
Nitrogen compound	Ammonia Trimethylamine	Toilets, animals, and garbage
Sulphur compound	Hydrogen sulfide, Methyl sulfide, Methyl mercaptan	Wastewater treatment and garbage
Aldehyde compound	Formaldehyde Acetaldehyde	Building materials, furniture, and paint
Aliphatic compound	Propionic acid, N-acetic acid Isobutyric acid	Animals, nursing homes for the elderly, gymnasiums
Hydrogen carbonate compound	Benzene, Toluene, Xylene, IPA, MIBK	Printing, painting, and semiconductors
Smell of mold	Water mold, black mold, white mold	Bath, toilet, room, locker room, dressing room

Major VOCs (Volatile Organic Compounds)

Name	Ionization energy	Chemical formula	Removal reaction formula
Toluene	8.83eV	C ₇ H ₈	C ₇ H ₈ +9O ₂ → 7CO ₂ +4H ₂ O
Benzene	9.24eV	C ₆ H ₆	2C ₆ H ₆ +15O ₂ → 12CO ₂ +6H ₂ O
Ethane	11.52eV	C ₂ H ₆	2C ₂ H ₆ +7O ₂ → 4CO ₂ +6H ₂ O
Ammonia	10.07eV	NH ₃	4NH ₃ +3O ₂ → 2N ₂ +6H ₂ O
Formaldehyde	10.88eV	CH ₂ O	CH ₂ O+O ₂ → CO ₂ +H ₂ O
Xylene	10.23eV	C ₈ H ₁₀	2C ₈ H ₁₀ +5O ₂ → 4CO ₂ +4H ₂ O



Mechanism of sterilization of floating bacteria

It sterilizes by destroying proteins in the cell membrane on the surface. As it does not affect the inner cell membrane, resistant bacteria cannot be produced.

Effect Verification (1)

Verification of sterilization effect by ion generator treatment

Conference room
Floating bacteria

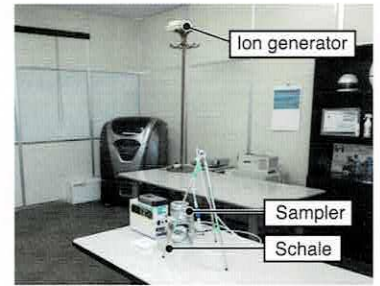
After incubation at 35°C for 48 hours, incubated at 25°C for 168 hours



Untreated: 2015.7.12 12:00 Left for 1 hour
Number of colonies: 27

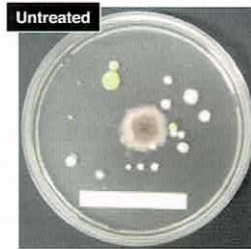


Ion treatment: 2015.7.12 13:00 Exposed for 24 hours
Number of colonies: 10



1m³ sealed box
Falling bacteria

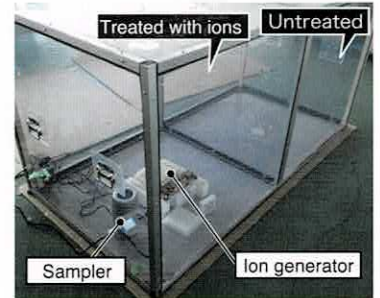
After incubation at 35°C for 48 hours, incubated at 25°C for 168 hours



Untreated: 2015.7.11 10:00 Left for 1 hour
Number of colonies: 22

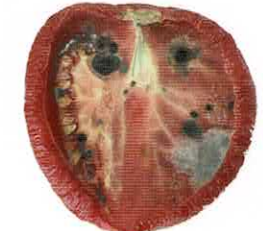
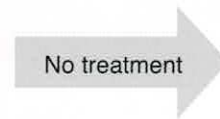
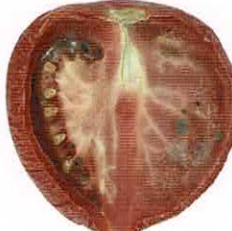
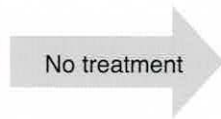


Ion treatment: 2015.7.11 11:30 Exposed for 24 hours
Number of colonies: 1



Experiments on the sterilization effect of Facion

(Five days into Facion)



Pre-experiment

3 days later

5 days later

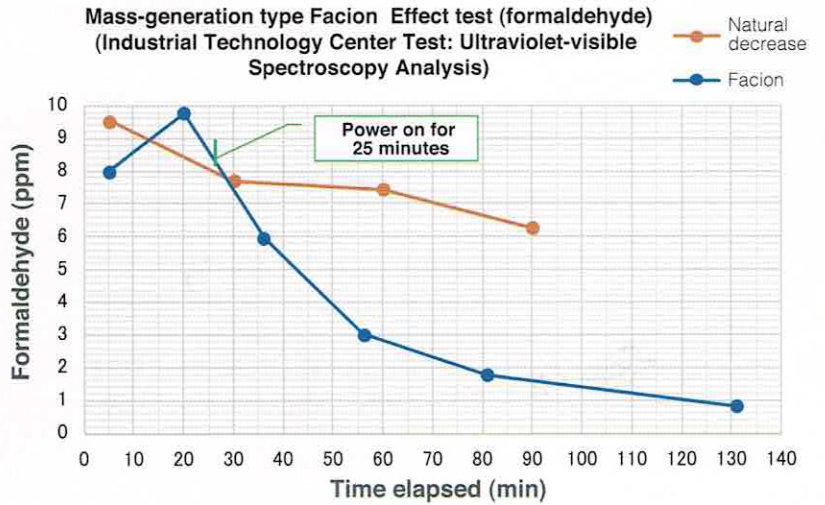
List of laboratories testing the efficacy and safety of sterilization

■ Facion

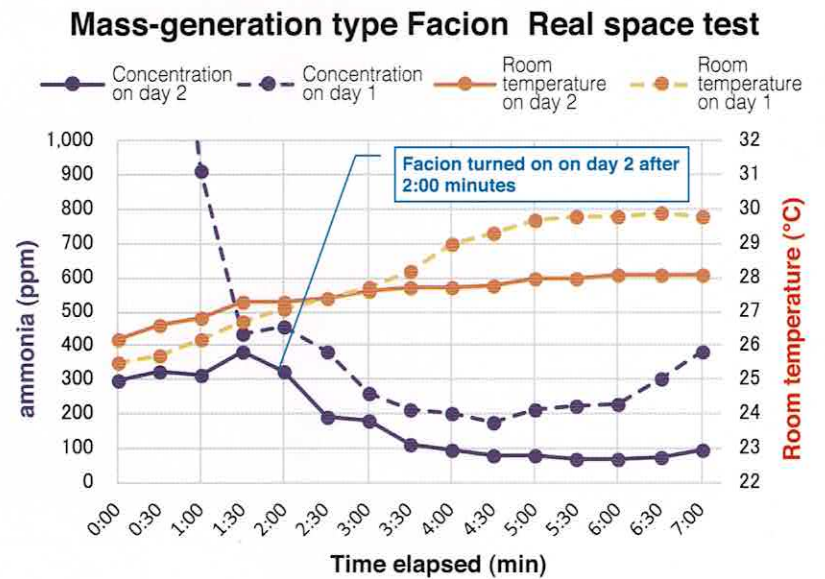
Formaldehyde	Decrease in concentration was confirmed.	Gunma Industrial Technology Center, Gungise No. 2305-273
Escherichia coli	Inactivation has been confirmed.	Gunma Industrial Technology Center, Gungise No. 2312-90
Staphylococcus aureus	Inactivation has been confirmed.	Gunma Industrial Technology Center, Gungise No. 2312-91
Influenza	Inactivation was confirmed.	(General incorporated association) Kitasato Research Center for Environmental Science Kitakanhatsu No. 2015_0050
Ozone measurement	Less than 0.05. JQA has been obtained.	(General incorporated association) Japan Quality Assurance Organization KL 25150083
EMI Test	VCCI class B has been cleared.	Okii Engineering Co., Ltd. 152300

Effect Verification (2)

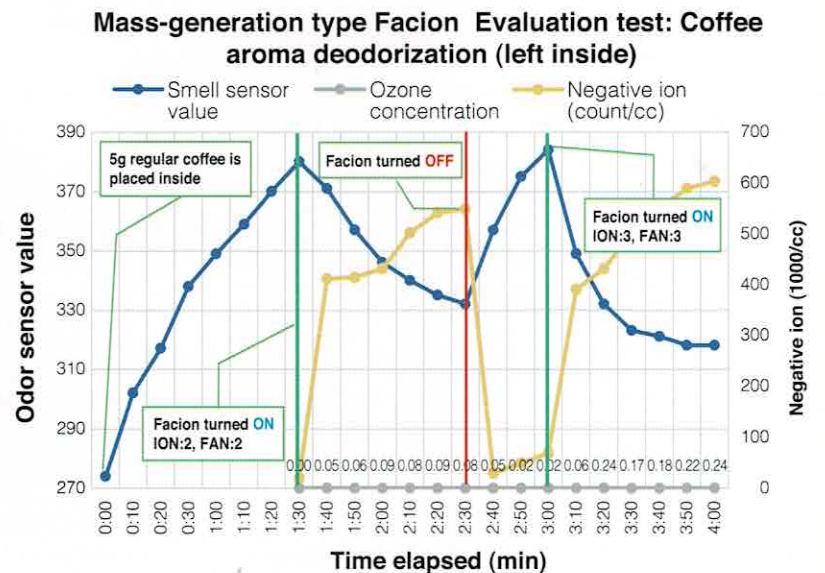
VOC measurement test



Ammonia concentration test



Coffee aroma test





Usage examples

Clean various living spaces.

Virus decomposition / Bacterial decomposition / Chemical substance decomposition
/ Original decomposition of odor / Stain control / Static electricity suppression



living



kitchen



bathroom



nursery



bedroom



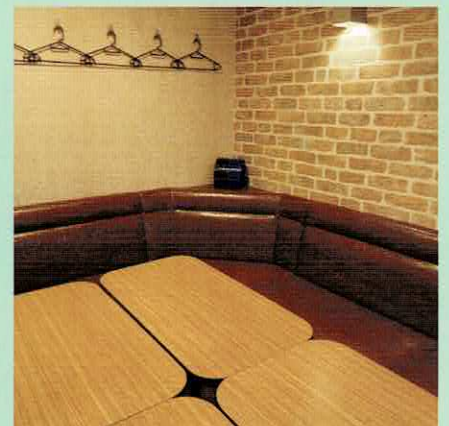
toilet



waiting room



Hospital room nursing home



Karaoke room

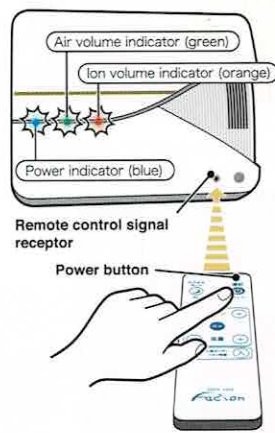
Method of use

1. When you press the power button on the remote control, the three indicators on the front light up as shown on the right, and the air starts blowing.

2. Use the air volume and ion buttons on the remote control to set the desired level. The level is indicated by the indicator light.

Air volume level: 1 (Low) to 3 (High)
Ion level: 1 (Low) to 3 (High)

3. If the power button is pressed while the air is blowing, the indicator light will turn off and the air will stop blowing.



About display indicators

When the power button is pressed, the blue indicator light lights up and the air starts blowing. Press again to turn off the indicator light and stop operation.

The combination of the air volume and ion buttons allows the setting of nine different modes. The green and orange indicators are combined to display the following:
*See [Facion display indicators] in the specifications

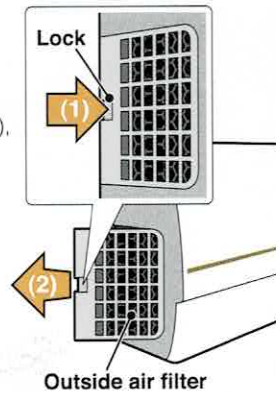
*To use the remote control, point it at the remote control signal receptor of the main unit. If there is an object between the remote control and the main unit, or if you operate the remote control from an angle or distance where the remote control signal cannot reach the signal receptor, you may not be able to operate the main unit.
*The main unit can only be operated using the remote control.
The product cannot be operated if the remote control is damaged or lost.
*If the power supply to the product is interrupted due to a power failure or disconnection of the power supply, when the power supply to the product is resumed, it will automatically return to the state before the power supply was stopped.
Note that if the power supply is cut off during operation, the product will automatically start operating when the power supply is resumed.

Maintenance

Cleaning the outside air filter

Once a month, remove the outside air filter at the inlet and clean the filter. If the filter is clogged with dirt, the performance of the product will be degraded.

1. Turn off the main unit using the remote control.
 2. To remove the outside air filter, pull the filter toward you in the direction of arrow (2), while pressing the knob in the direction of arrow (1).
 3. Clean the air filter.
 4. After cleaning, return the inlet cover to its original position.
- If the dirt does not come off, wash with water using a mild detergent. Wipe off well after washing and before use.



The outside air filter can be removed for maintenance, but there is a high-voltage circuit inside the product, so it is very dangerous to touch parts other than the outside air filter. Do not touch them as it may result in electric shock, fire or malfunction.

Remote control battery replacement

If the remote control cannot be used during normal operation, the battery may need to be replaced.

*Keep batteries out of the reach of children and dispose of them according to local regulations.

Specifications



Select from 3 different air volume and ion levels and 9 different modes

Product name	Facion
Model number	KS-24-JN
Dimensions (W×H×Dmm)	320 x 250 x 120
Material	ABS, POM, etc.
Weight	Approximately 2.0 kg
Usable temperature	5 — 35 °C
Usable humidity	20 — 60%
Electric source	DC 12 V (Includes dedicated AC adapter.)
Power cord length	Approx. 1.8 m
Power consumption	12 W maximum
Applicable floor area	Up to 40 m ² (Recommended value)
Safety mechanism	Overcurrent prevention
Consumable parts	Ion tube, filter (intake side)

*1 Actual effects (deodorization and sterilization) may vary depending on the usage environment (temperature, humidity, etc.).
*2 Please note that the design, specifications and appearance of the product are subject to change without prior notice.

Facion display indicators

Remote control operation		Ion volume (Green LED)	Ion volume (Amber LED)	Applicable floor area (for reference)	Air volume and ion volume level
Air volume	Ion				
⊖	⊖	●○○	●○○	10m ²	Air volume: 1 Ion: 1
⊖	⊖	●●○	●○○		Air volume: 2 Ion: 1
⊖	⊖	●●●	●○○		Air volume: 3 Ion: 1
⊖	⊕	●○○	●●○	30m ²	Air volume: 1 Ion: 2
Standard		●●○	●●○		Air volume: 2 Ion: 2
⊕		●●○	●●○		Air volume: 3 Ion: 2
⊖	⊕	●○○	●●●	40m ²	Air volume: 1 Ion: 3
⊕	⊕	●○○	●●●		Air volume: 2 Ion: 3
⊕	⊕	●○○	●●●		Air volume: 3 Ion: 3

*The "Remote Control Operation" column in the above table indicates the buttons to be pressed after pressing the "Standard" button. A blank cell means that no buttons should be pressed.
*When an error occurs, the indicator light flashes rapidly. In this case, turn the power off and on again. If it still continues to flash, stop operation and contact the contractor who installed the product or your dealer.



Warning: If the product generates abnormal heat, sounds or odors, stop operation immediately and remove the AC adapter from the outlet. Failure to do so may result in electric shock, fire, or malfunction.

Dealer

販売

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